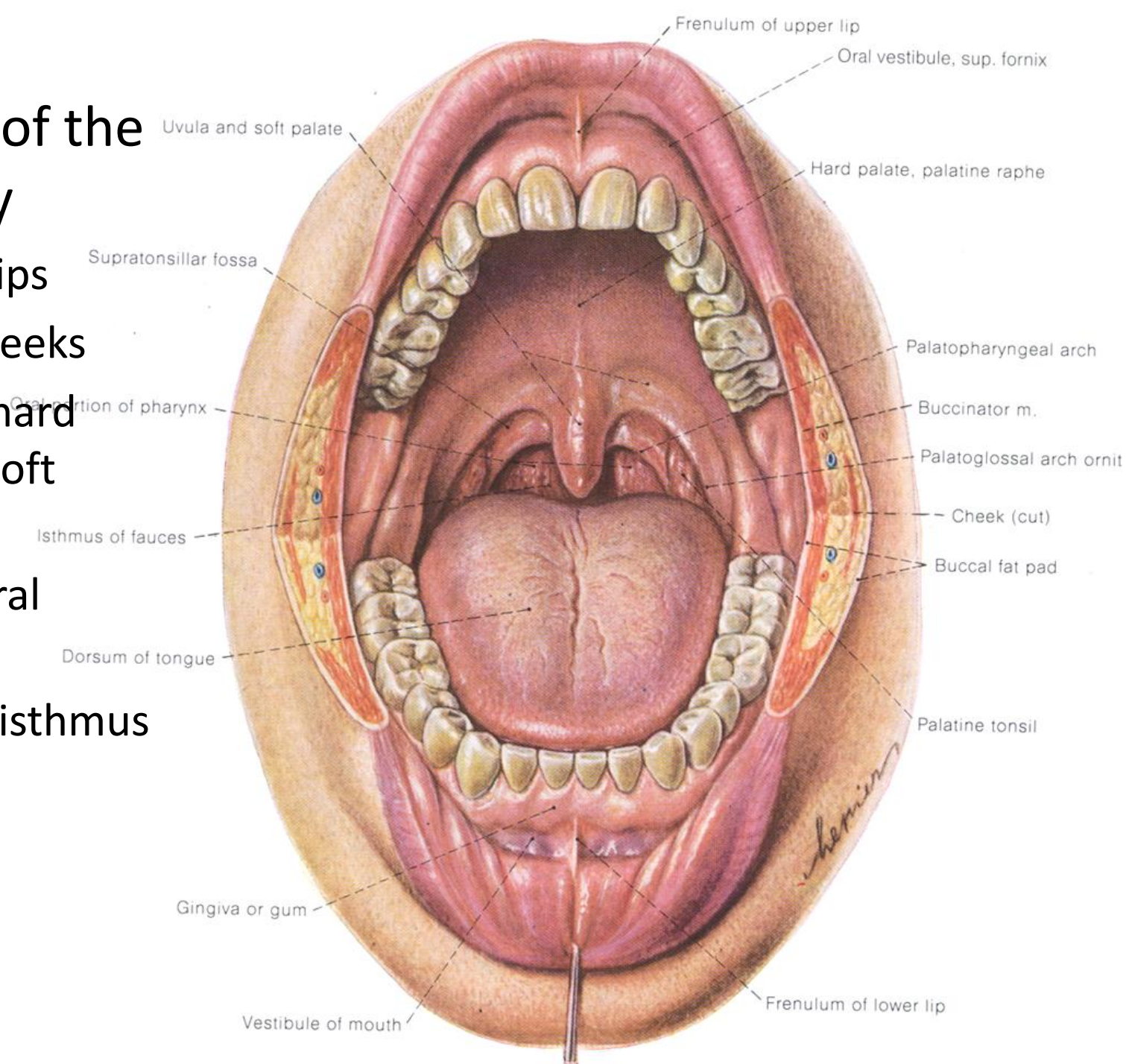




Oral Cavity ProfDrMTY

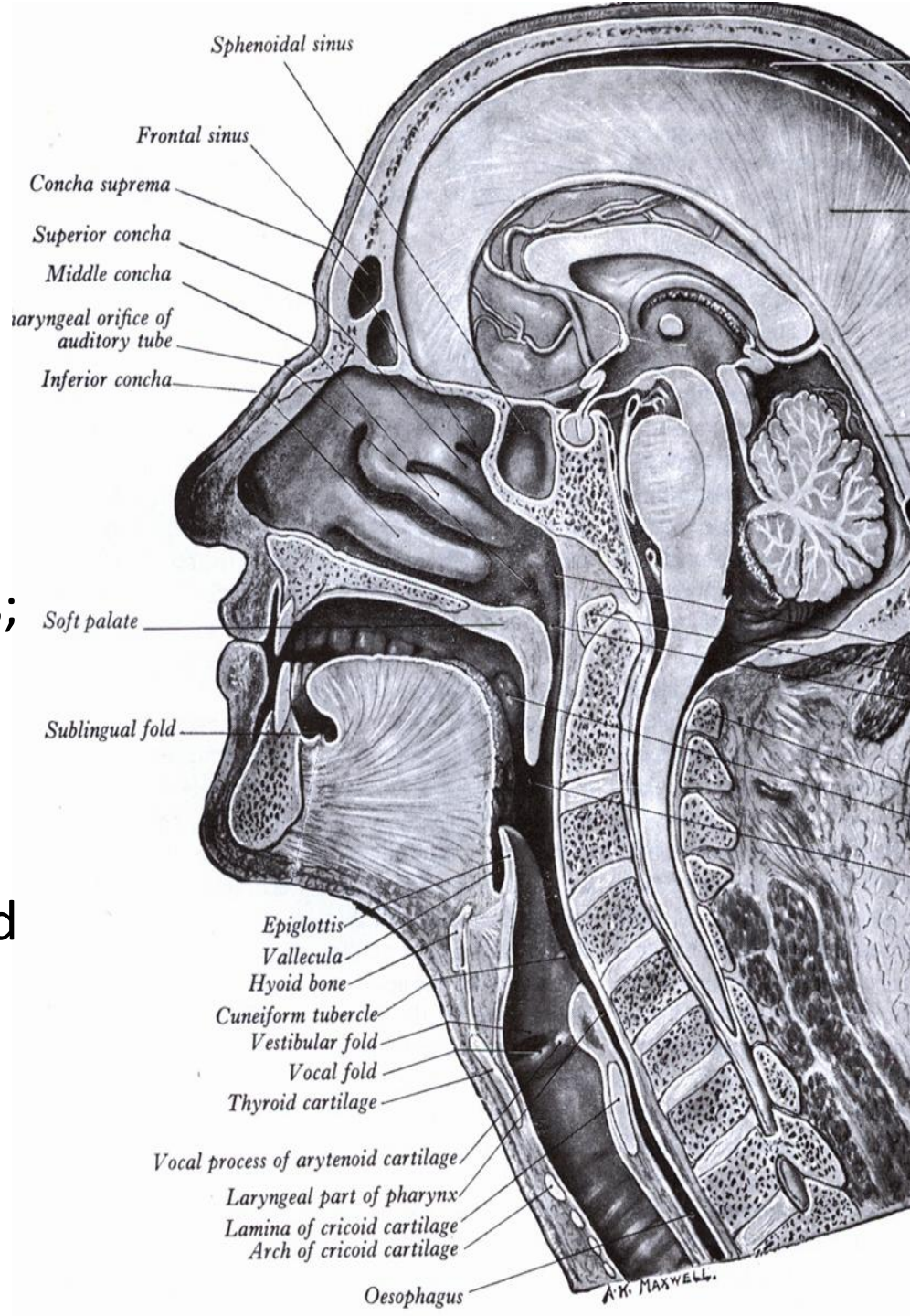
Boundaries of the oral cavity

- Anteriorly; lips
- Laterally; cheeks
- Superiorly; hard palate and soft palate
- Inferiorly; oral diaphragm
- Posteriorly; isthmus faucium



Oral Cavity

- **Vestibule:** Bounded externally by lips and cheeks; internally by gums and teeth. Communicates with exterior by oral fissure
- **Oral cavity proper:** Bounded anteriorly and laterally by alveolar arches, teeth and gums; behind, it communicates with pharynx at the oropharyngeal isthmus. The roof is formed by the hard and soft palates. Floor by anterior region of tongue and remainder by mucosa lying on mylohyoid anteriorly and laterally

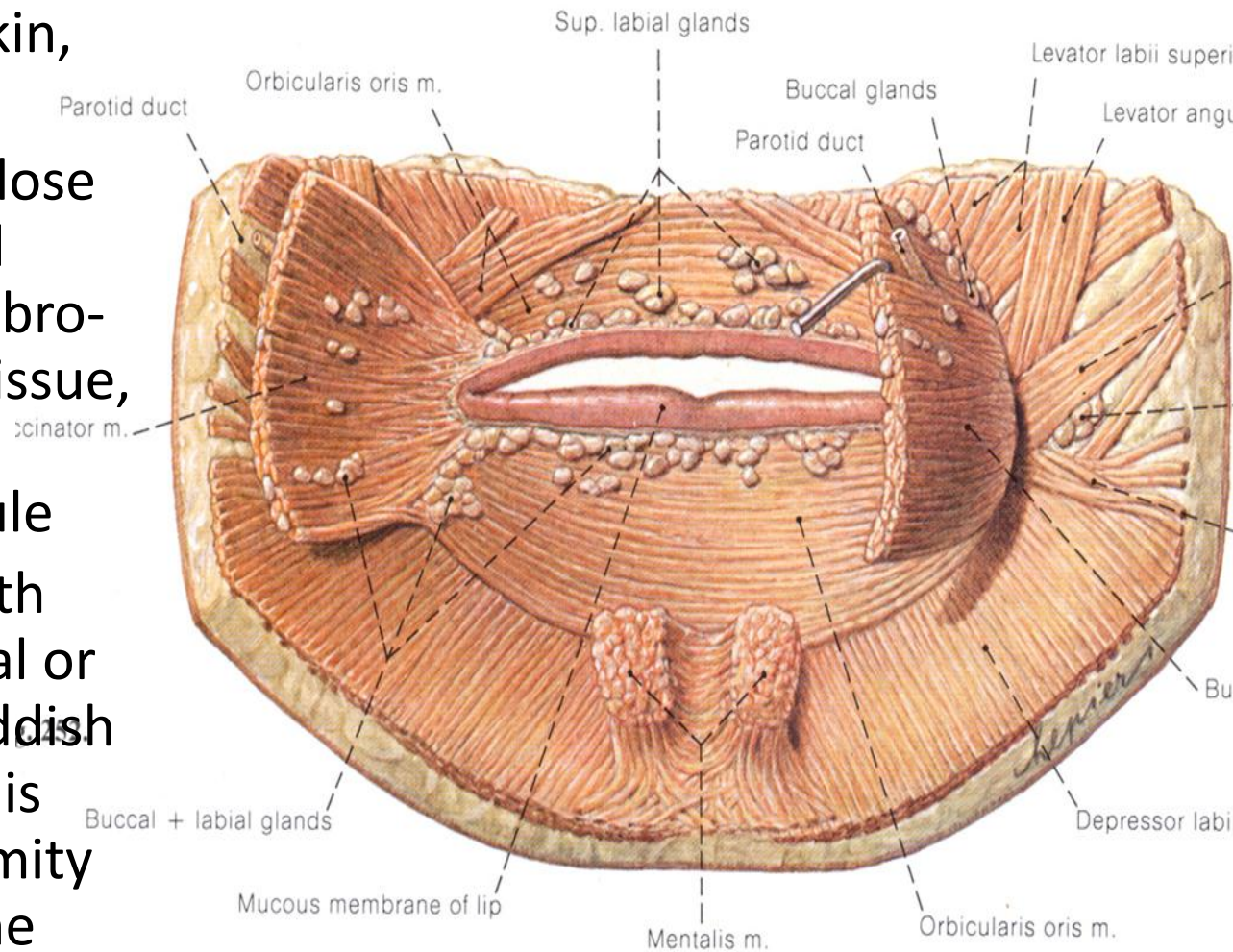


- When the teeth are apposed, vestibule is continuous with oral cavity proper behind 3rd molar teeth (**retromolar space**) and by minute clefts between adjacent teeth



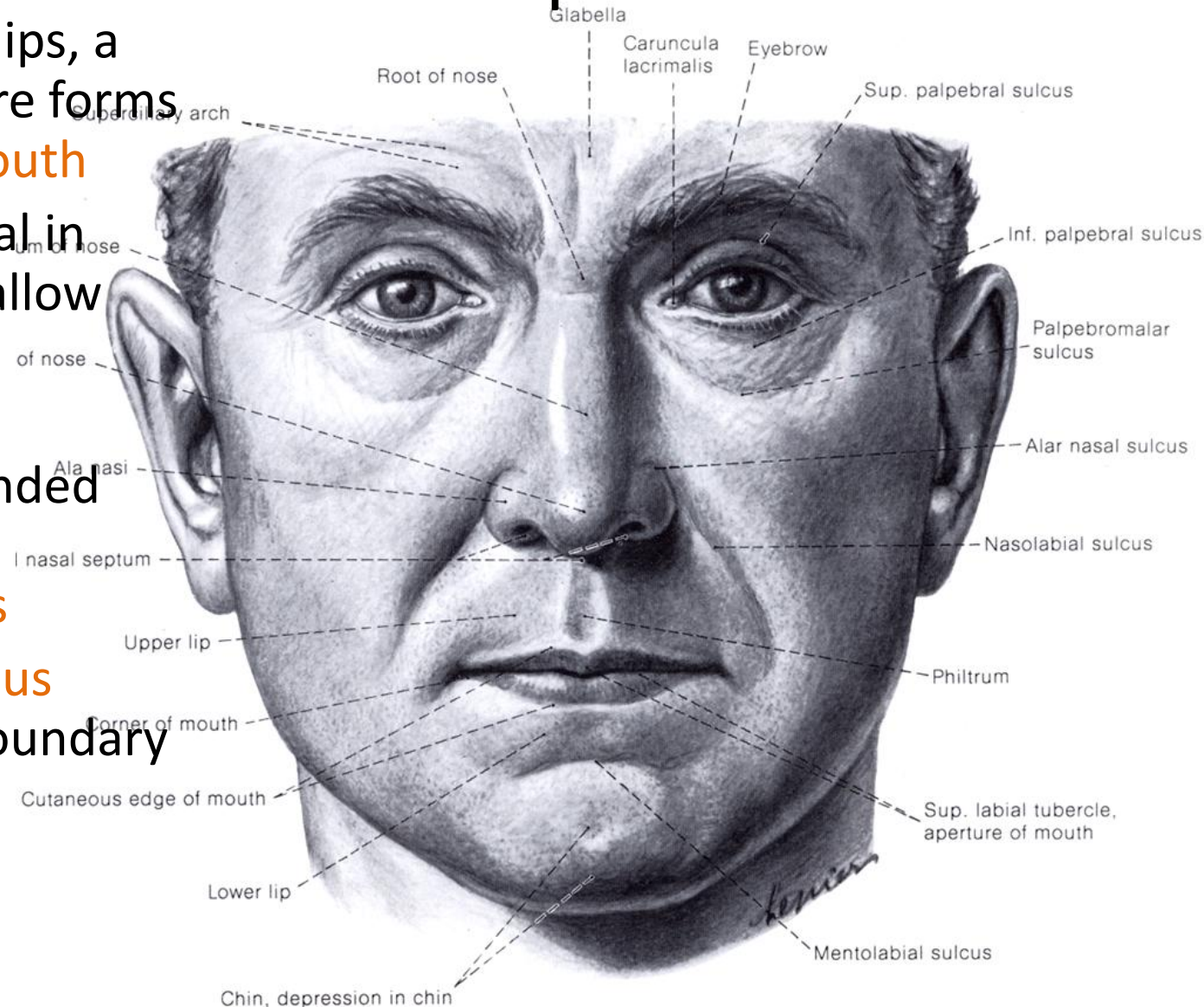
Lips

- Two fleshy folds surrounding oral orifice
- Lined externally by skin, internally by mucosa
- Skin and mucosa enclose orbicularis oris, labial vessels and nerves, fibroadipose connective tissue, labial salivary glands secreting into vestibule
- Skin is continuous with mucosa at transitional or vermilion border. Reddish colour of this region is because of the proximity of blood vessels to the epithelial surface



Lips

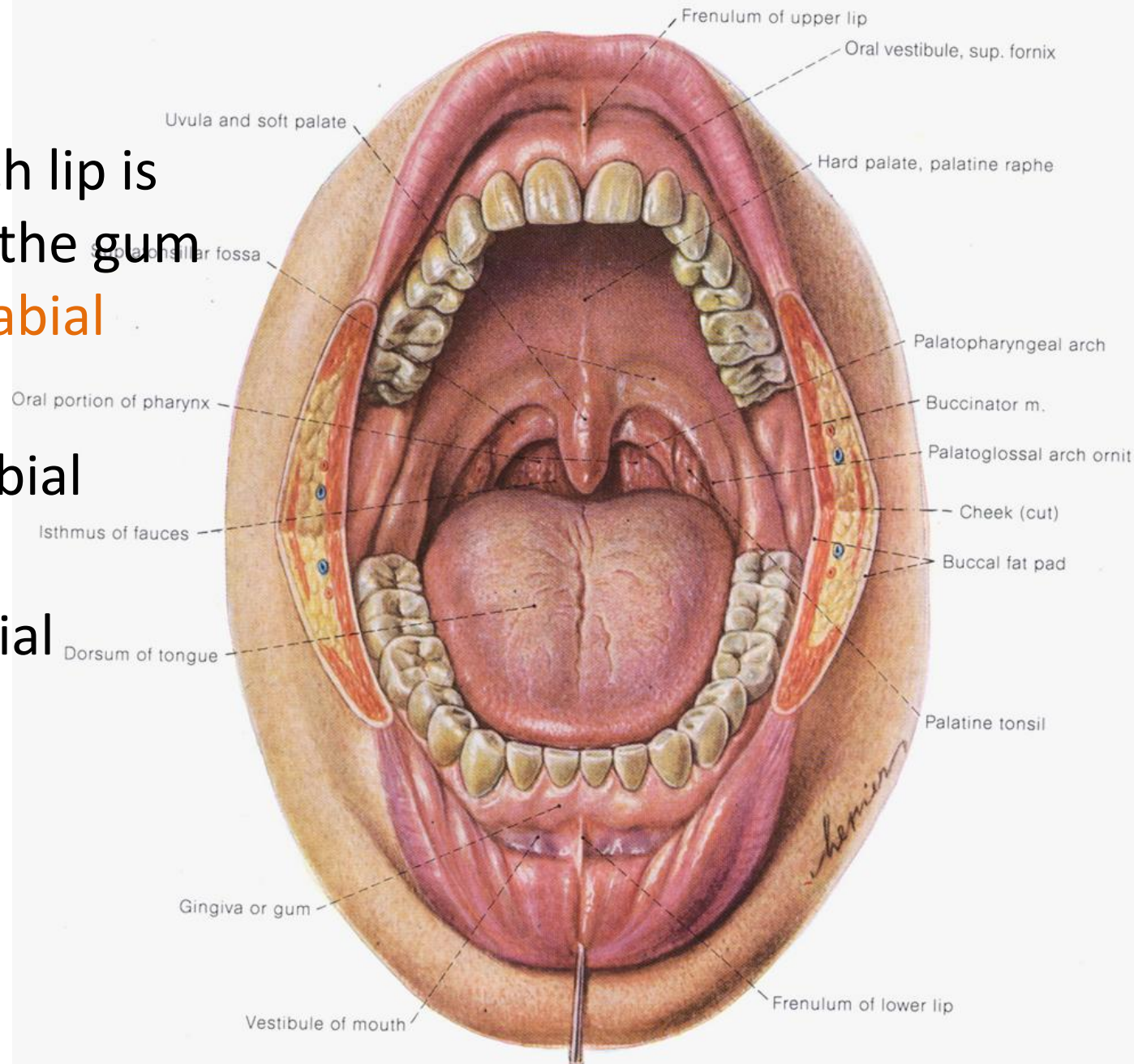
- On each side of lips, a labial commissure forms the **corner of mouth**
- Externally, central in upper lip is a shallow vertical groove; **philtrum**
- Upper lip is bounded laterally by the **nasolabial sulcus**
- **Mentolabial sulcus** forms inferior boundary of lower lip



Lips

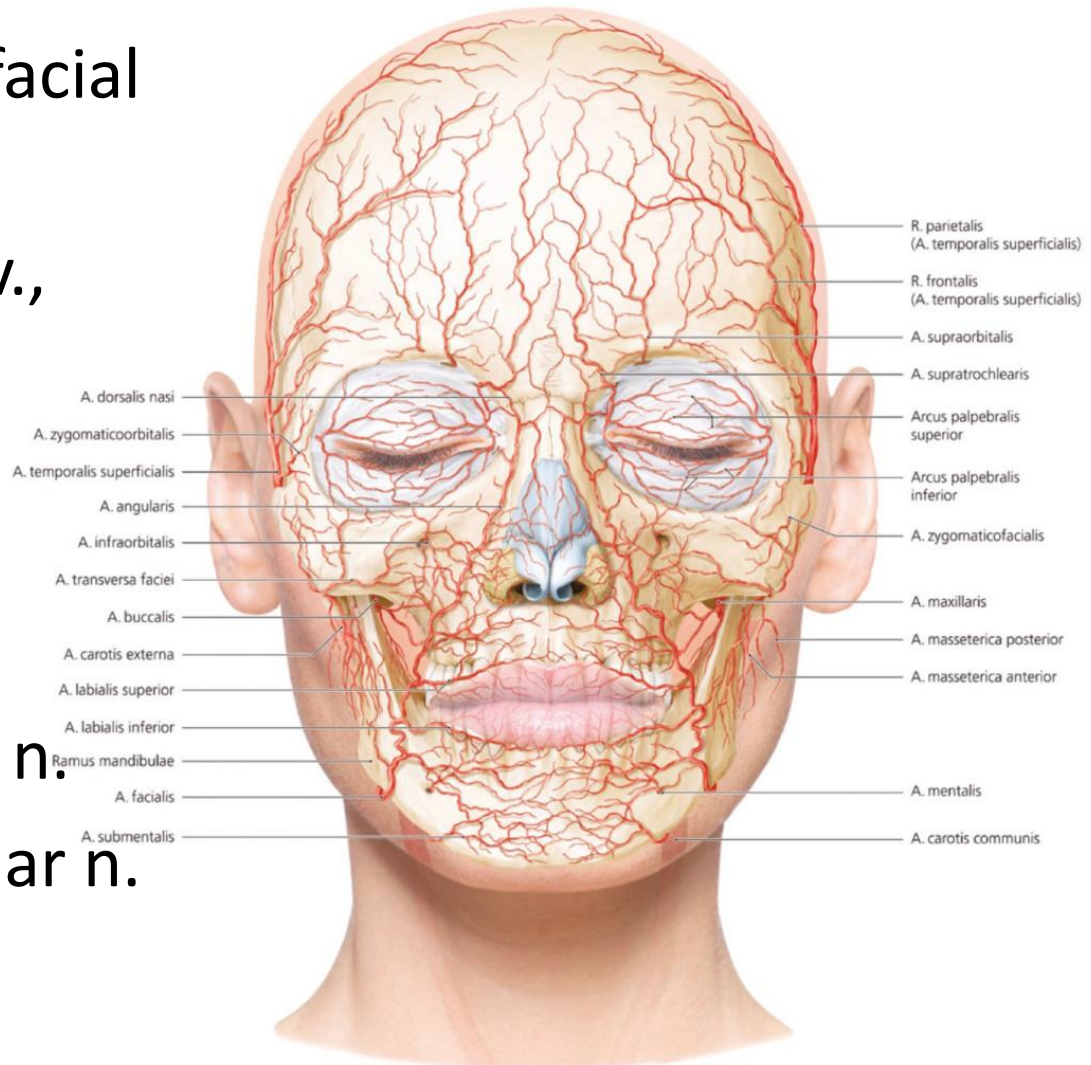
- Internally, each lip is connected to the gum by a median **labial frenulum**

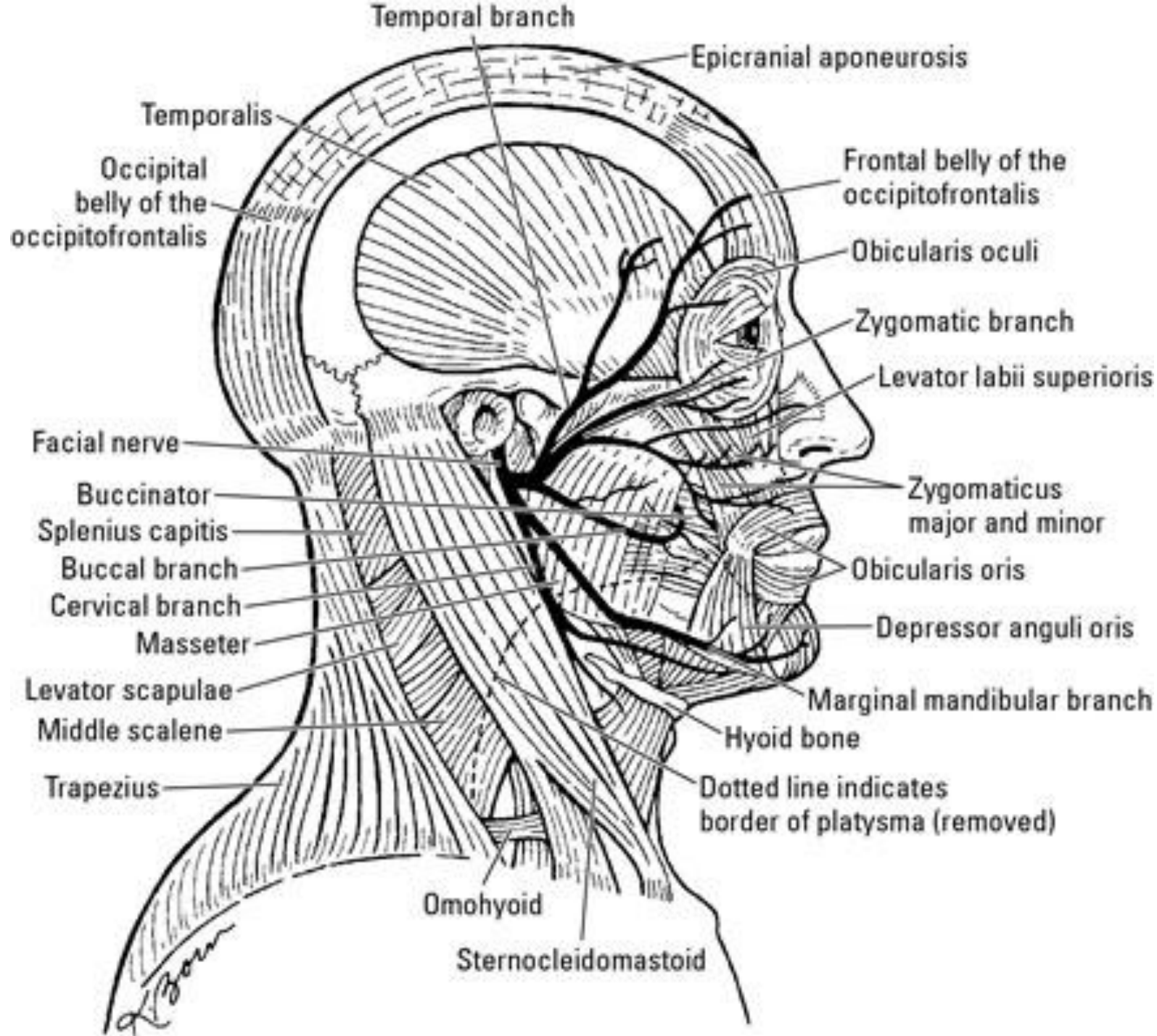
- Superior labial frenulum
- Inferior labial frenulum



Blood vessels and nn of the lips

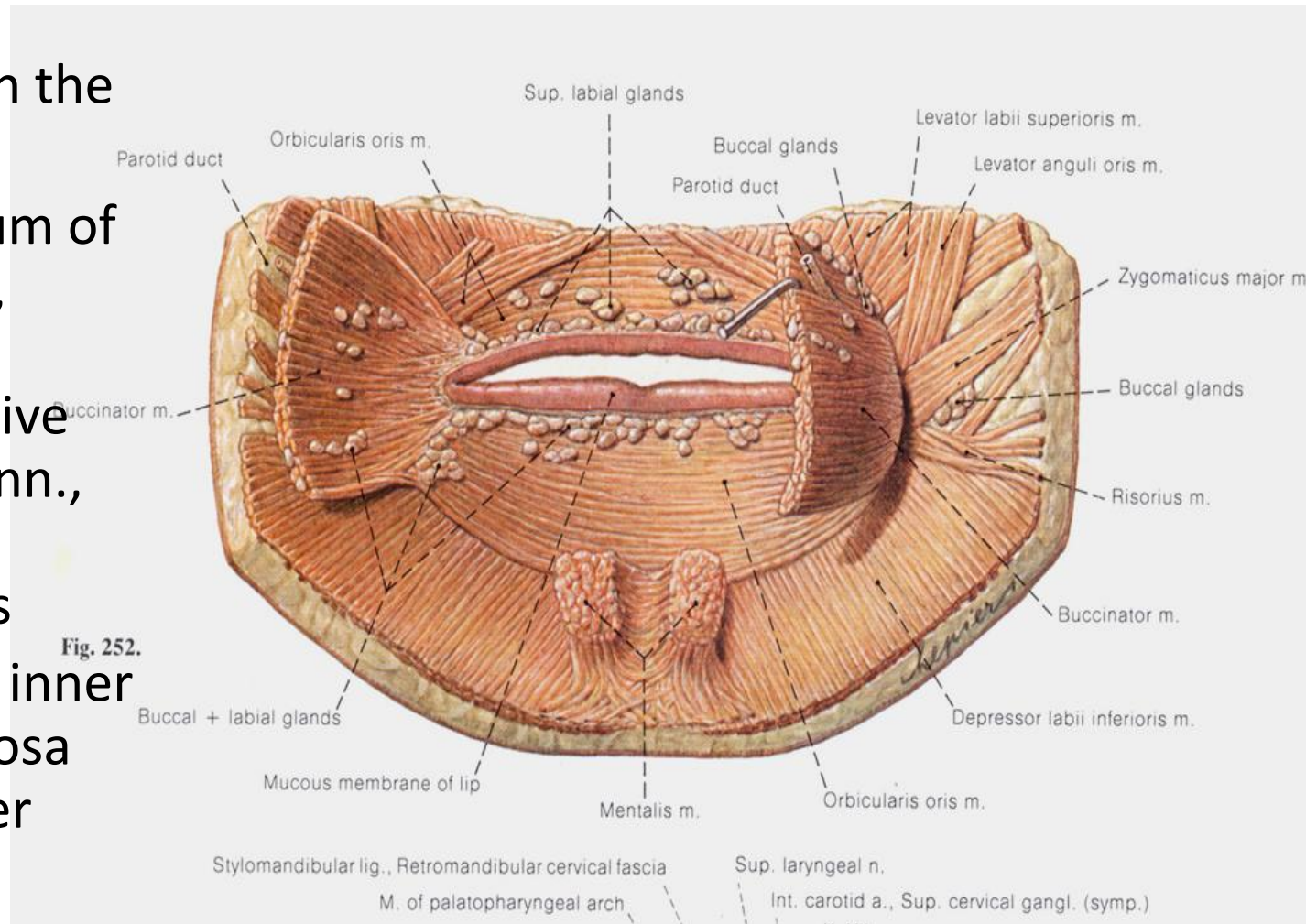
- Sup and inf labial aa. (facial a.)
- Sup labial v., inf labial v., submental v. > facial v.
- Submandibular lymph nodes and submental lymph nodes
 - Upper lip: Maxillary n.
 - Lower lip: Mandibular n.

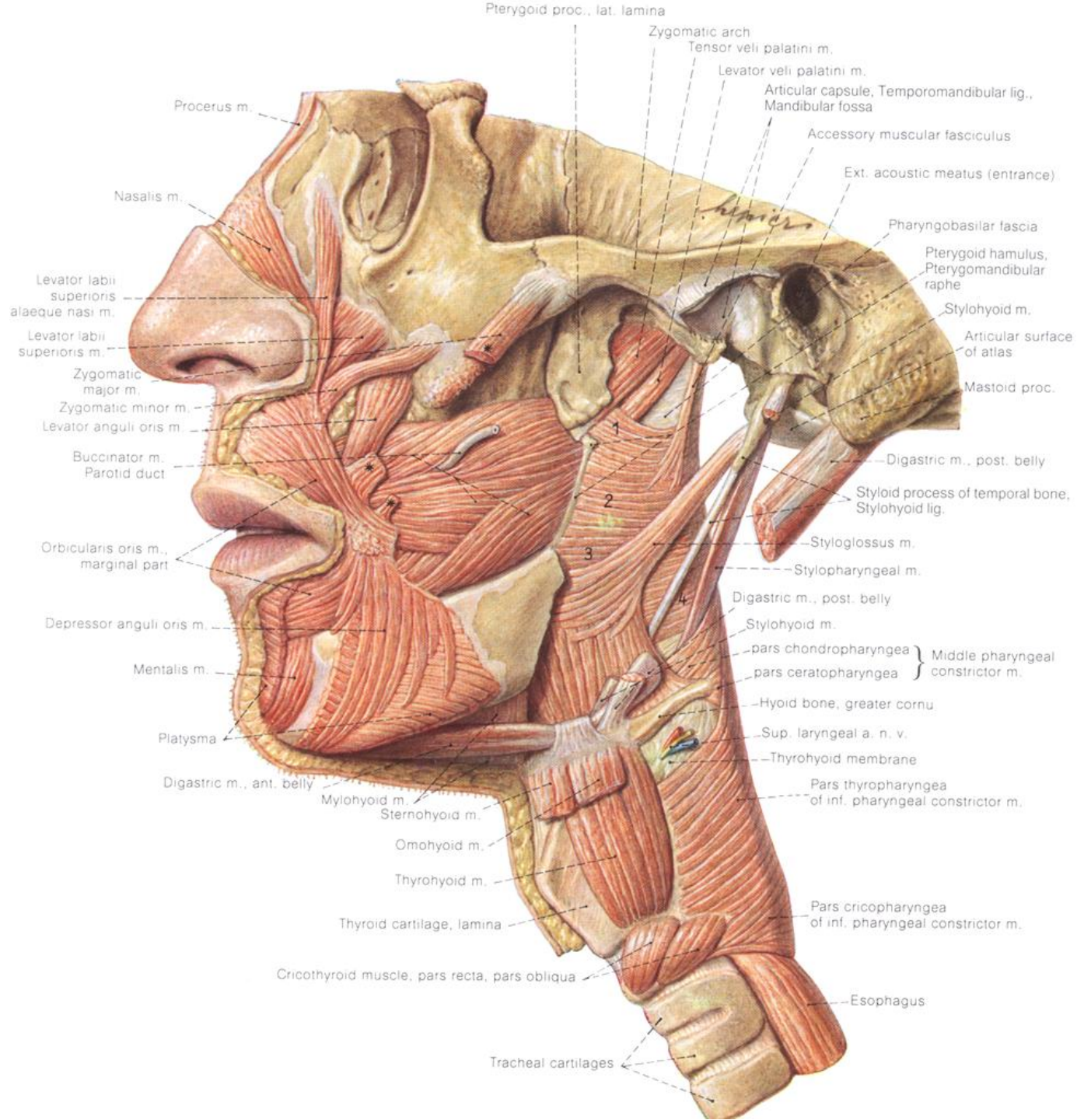




Cheeks

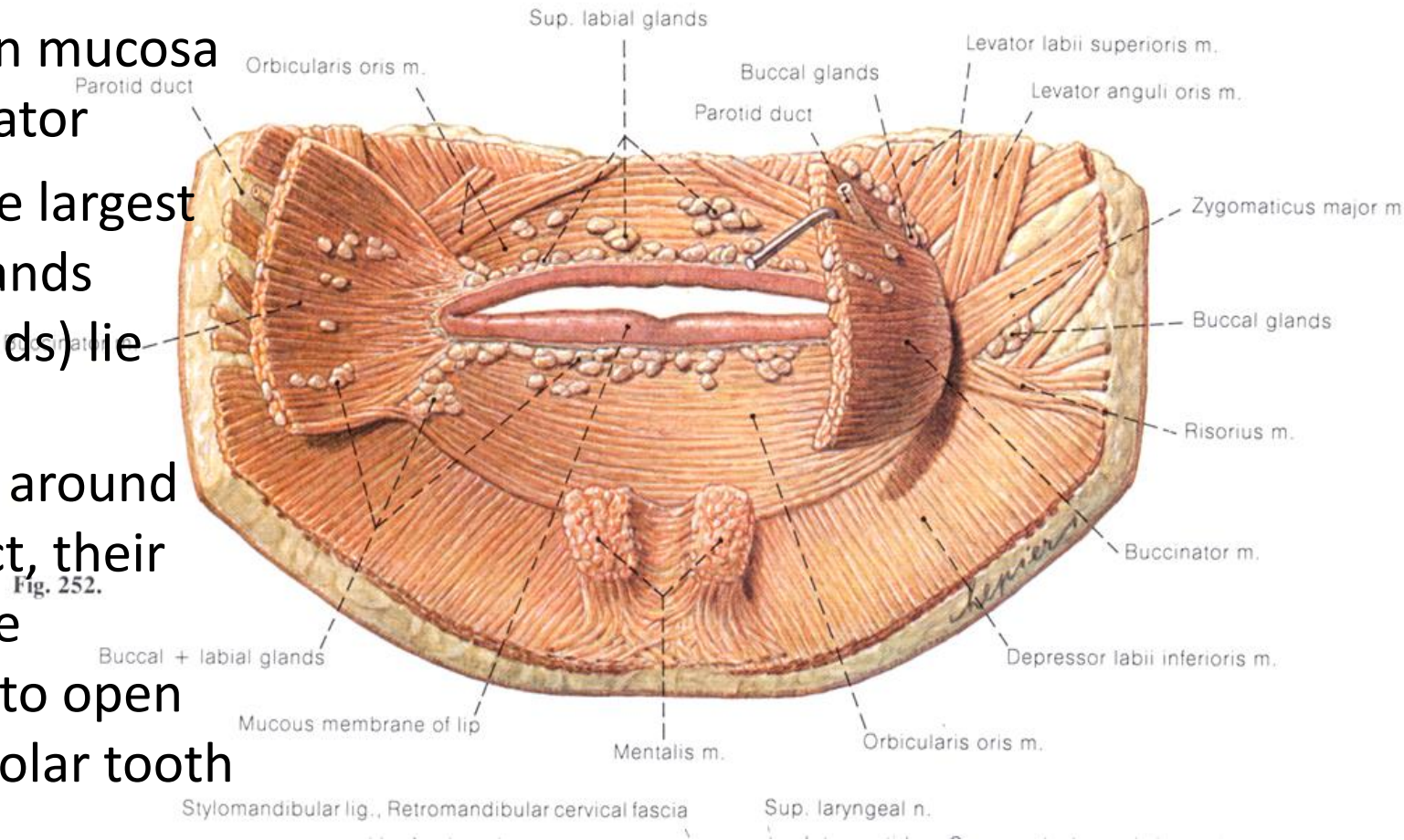
- Continuous with the lips in front
- Contain a stratum of skeletal muscle, adipose tissue, fibrous connective tissue, vessels, nn., buccal mucous (salivary) glands
- Covered on the inner surface by mucosa and on the outer surface by skin





Buccal mucous glands

- Small glands
- Lie between mucosa and buccinator
- 4 or 5 of the largest of these glands (molar glands) lie external to buccinator, around parotid duct, their ducts pierce buccinator to open near last molar tooth

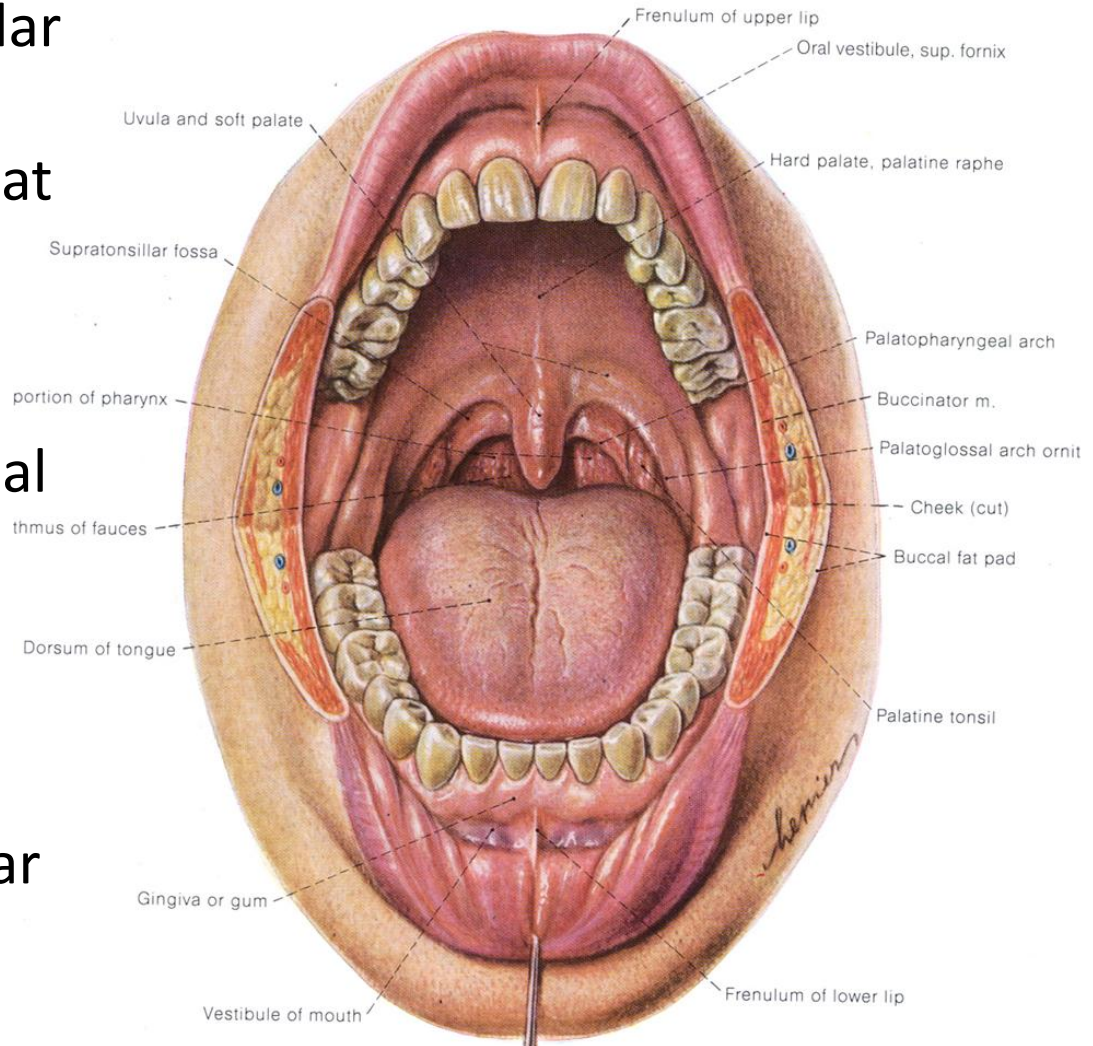


Blood vessels and nn. of cheeks

- A: Transverse facial a (superficial temporal a)
buccal a and infraorbital a (maxillary a)
- V: corresponding
- L: Submandibular and parotid lymph nodes
- N: maxillary n and mandibular n

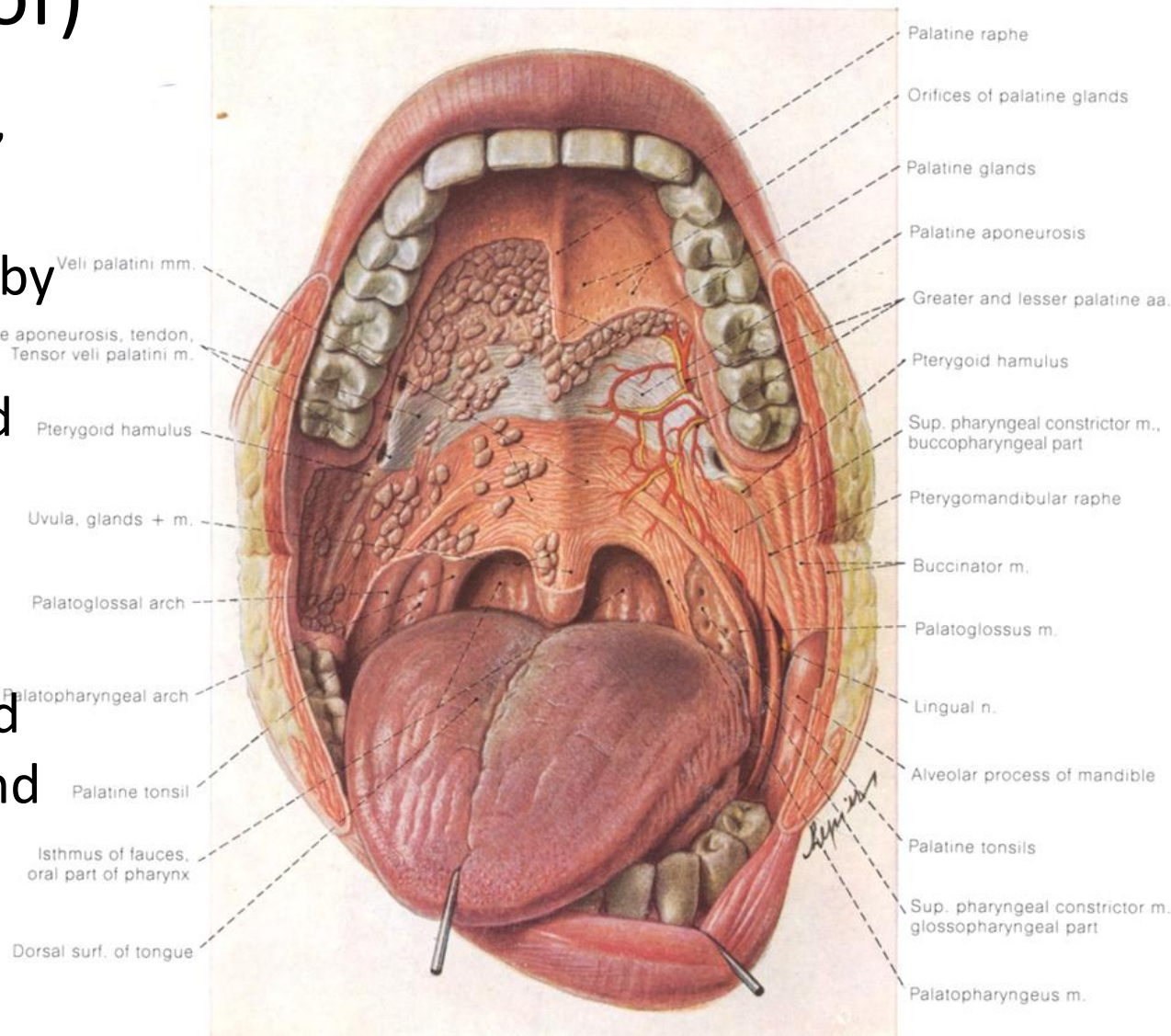
Gums (gingivae)

- Composed of dense, vascular fibrous tissue
- Firmly attached to cement at the necks of teeth and to bone of adjacent alveolar process
- A: Sup and inf labial a. (facial a.)
- V: Same with aa.
- L: Submandibular and submental lymph nodes
- N: Maxillary and mandibular nn.



Palate (oral roof)

- Hard palate (in front), soft palate (behind)
- Hard palate ; formed by palatine processes of maxillae (2/3 ant) and horizontal plates of palatine bones (1/3 post)
- Hard palate is covered by thick mucosa bound tightly to underlying periosteum.
- Between mucosa and periosteum are found palatine glands



Hard palate

- A zone lacking submucosa runs anteroposteriorly in the mid-line as a narrow, low ridge; **palatine raphe**
- At the anterior extremity of raphe, an oval prominence, the **incisive papilla** covers the incisive fossa at the oral opening of incisive canal
- Radiating outwards from palatine raphe in the anterior half, are irregular transverse ridges or **rugae**; (dense connective tissue)

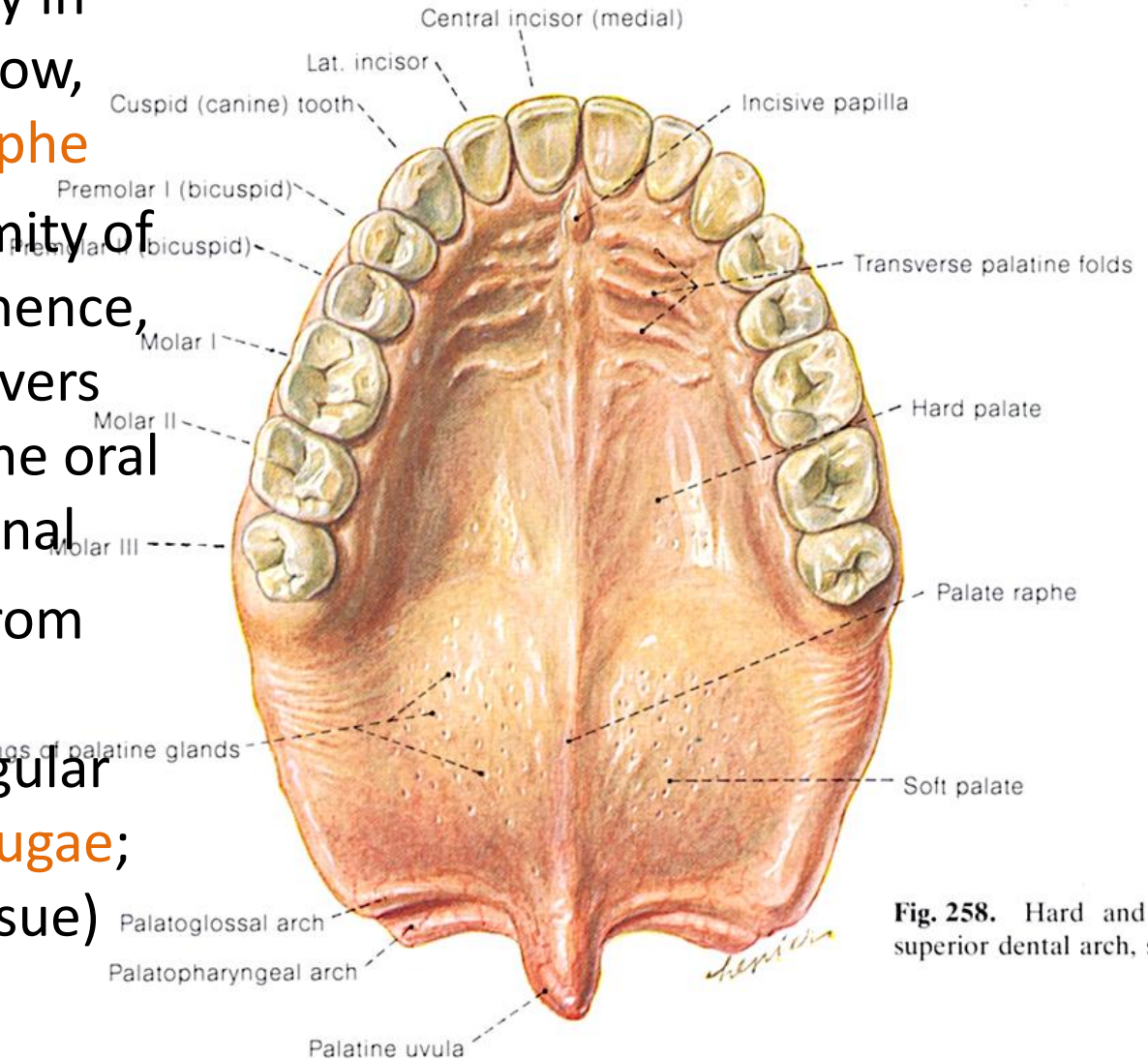
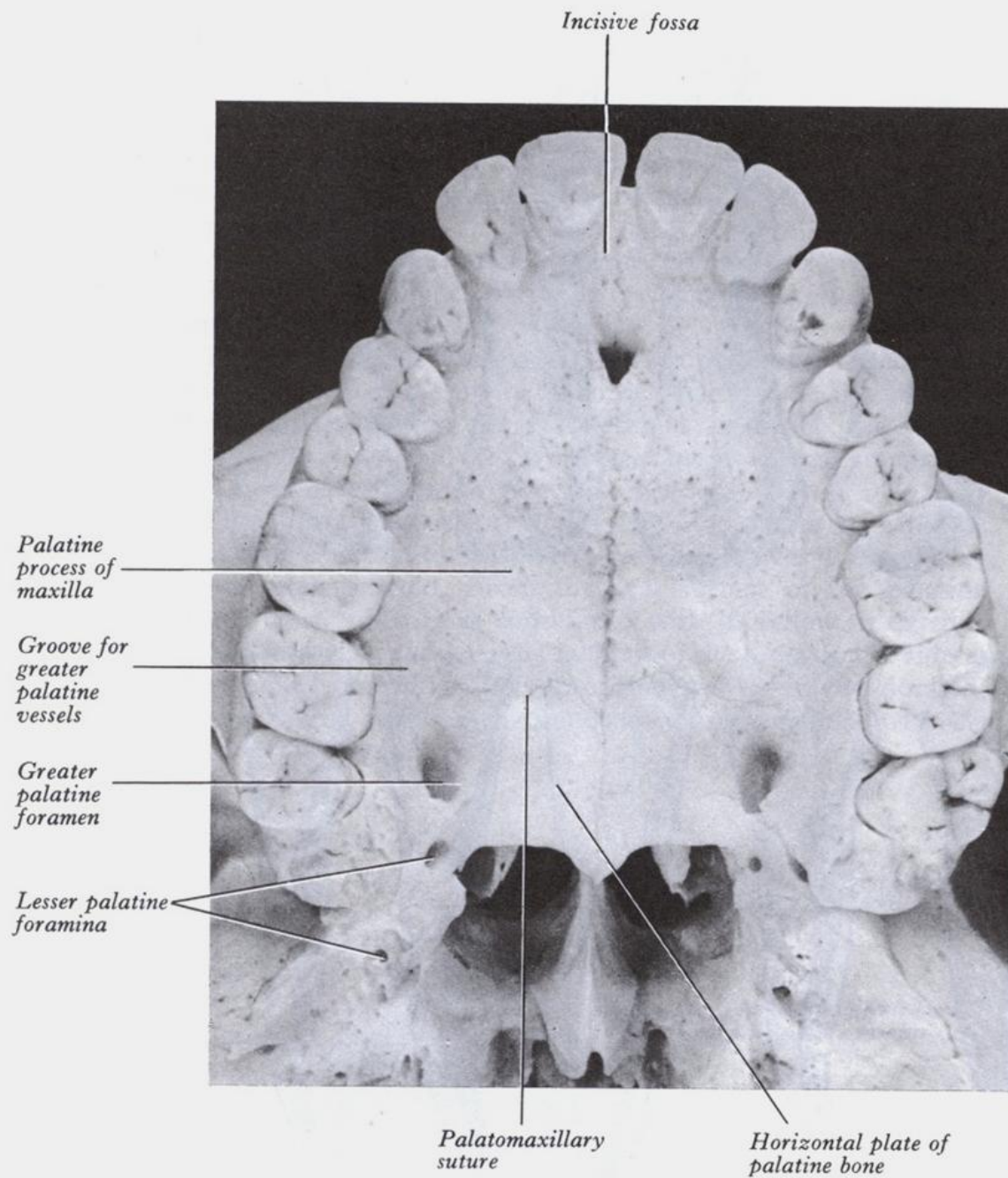


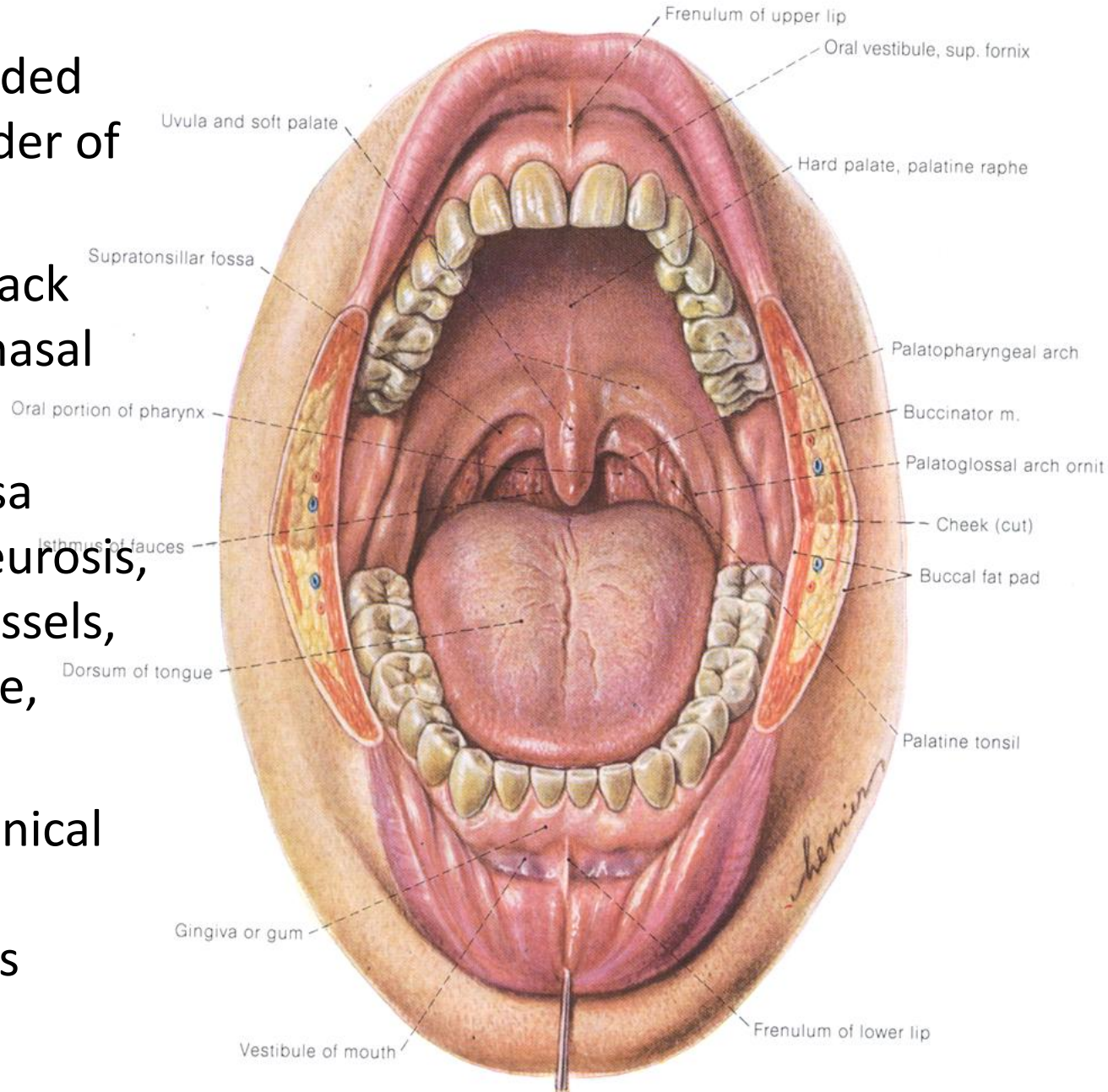
Fig. 258. Hard and soft palate, superior view of the superior dental arch, seen from the inside.



8.62 The permanent teeth of the upper dental arch: inferior aspect.

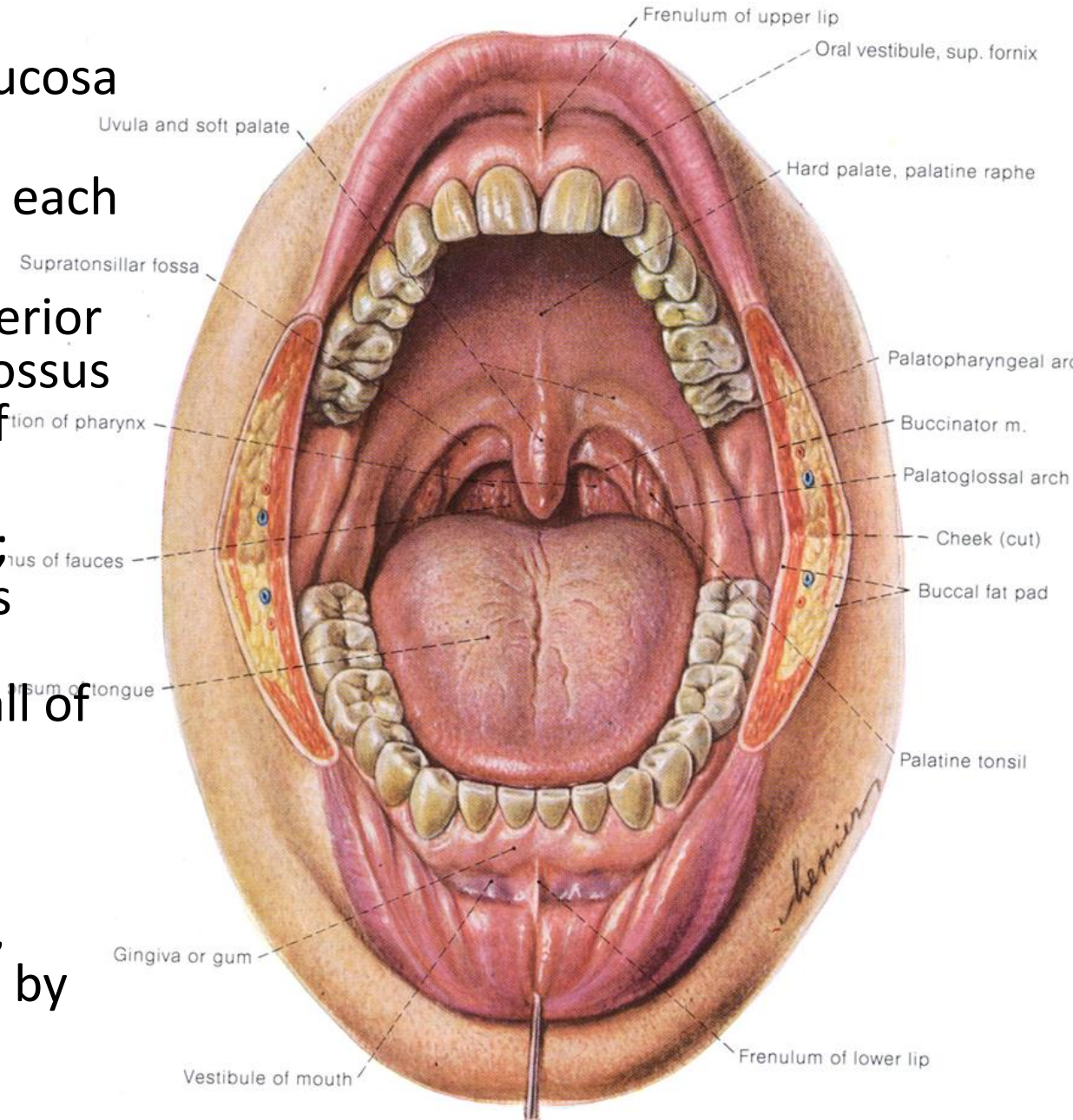
Soft palate

- Mobile flap suspended from posterior border of hard palate
- Slopes down and back between oral and nasal parts of pharynx
- Thick fold of mucosa enclosing an aponeurosis, muscular tissue, vessels, nn., lymphoid tissue, mucous glands
- **Uvula**; a median conical process, projects downwards from its posterior border



Palatal arches

- Two curved folds of mucosa containing muscle
- Descend laterally from each side of the soft palate
- **Palatoglossal arch**; anterior one, contains palatoglossus m., descends to side of tongue
- **Palatopharyngeal arch**; posterior one, contains palatopharyngeus m., descends on lateral wall of oropharynx
- **Isthmus of the fauces**; aperture between oral cavity and oropharynx, guarded on either side by palatoglossal folds



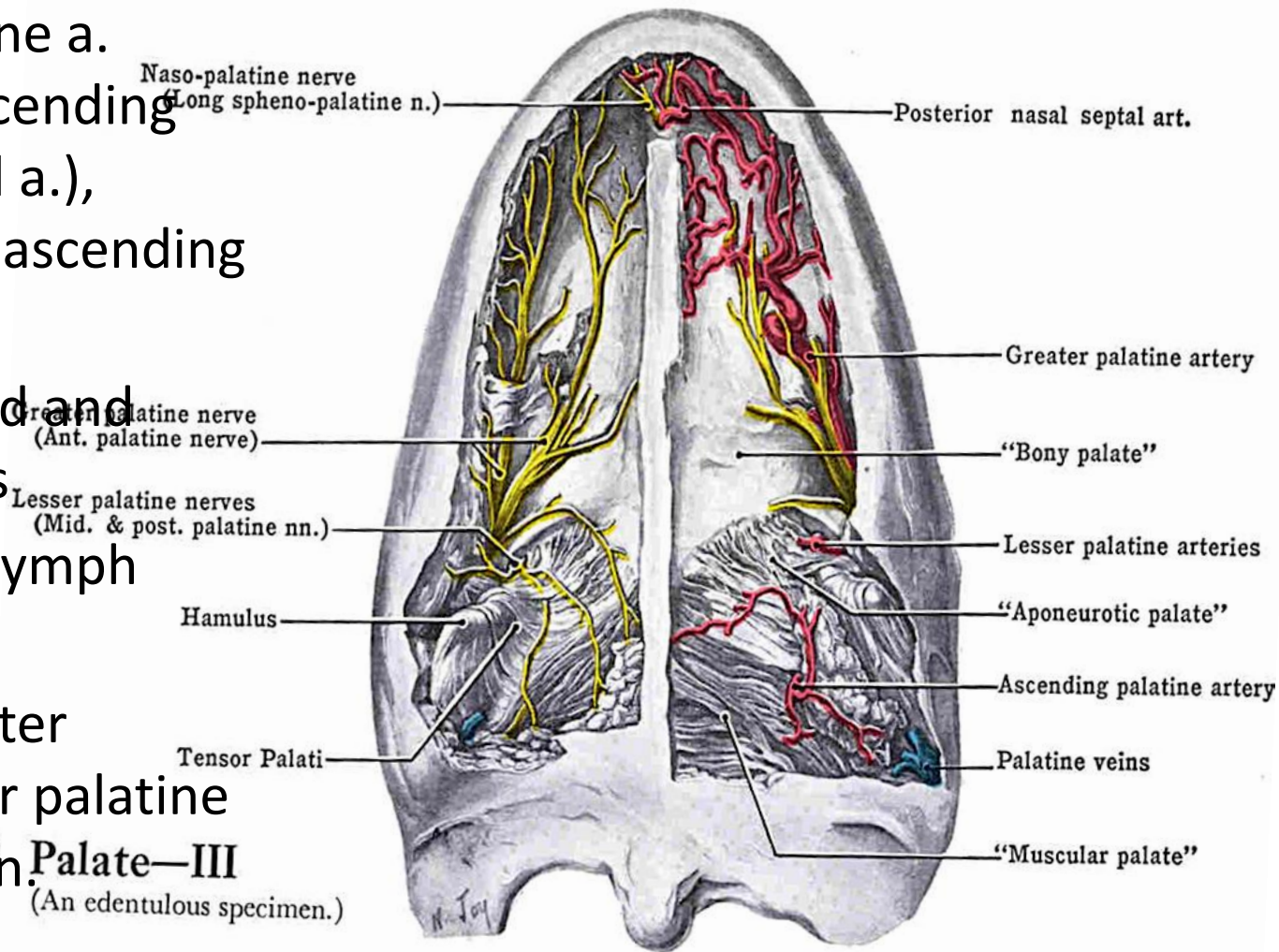
Blood vessels and nn. of soft palate

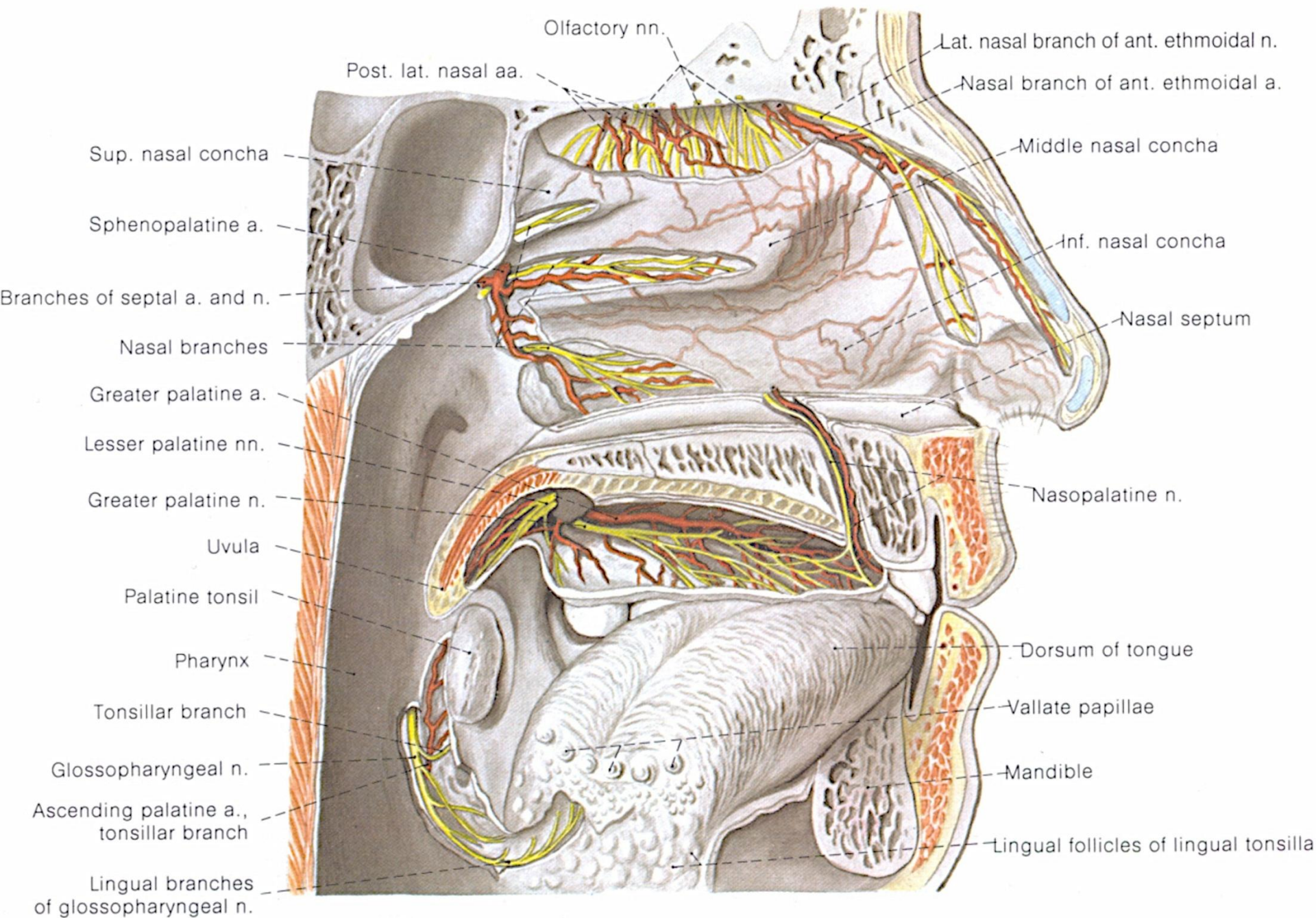
- A: Greater palatine a. (maxillary a.), ascending palatine a. (facial a.), palatine branch (ascending pharyngeal a.)

- V: Drain pterygoid and tonsillar plexuses

- L: Deep cervical lymph nodes

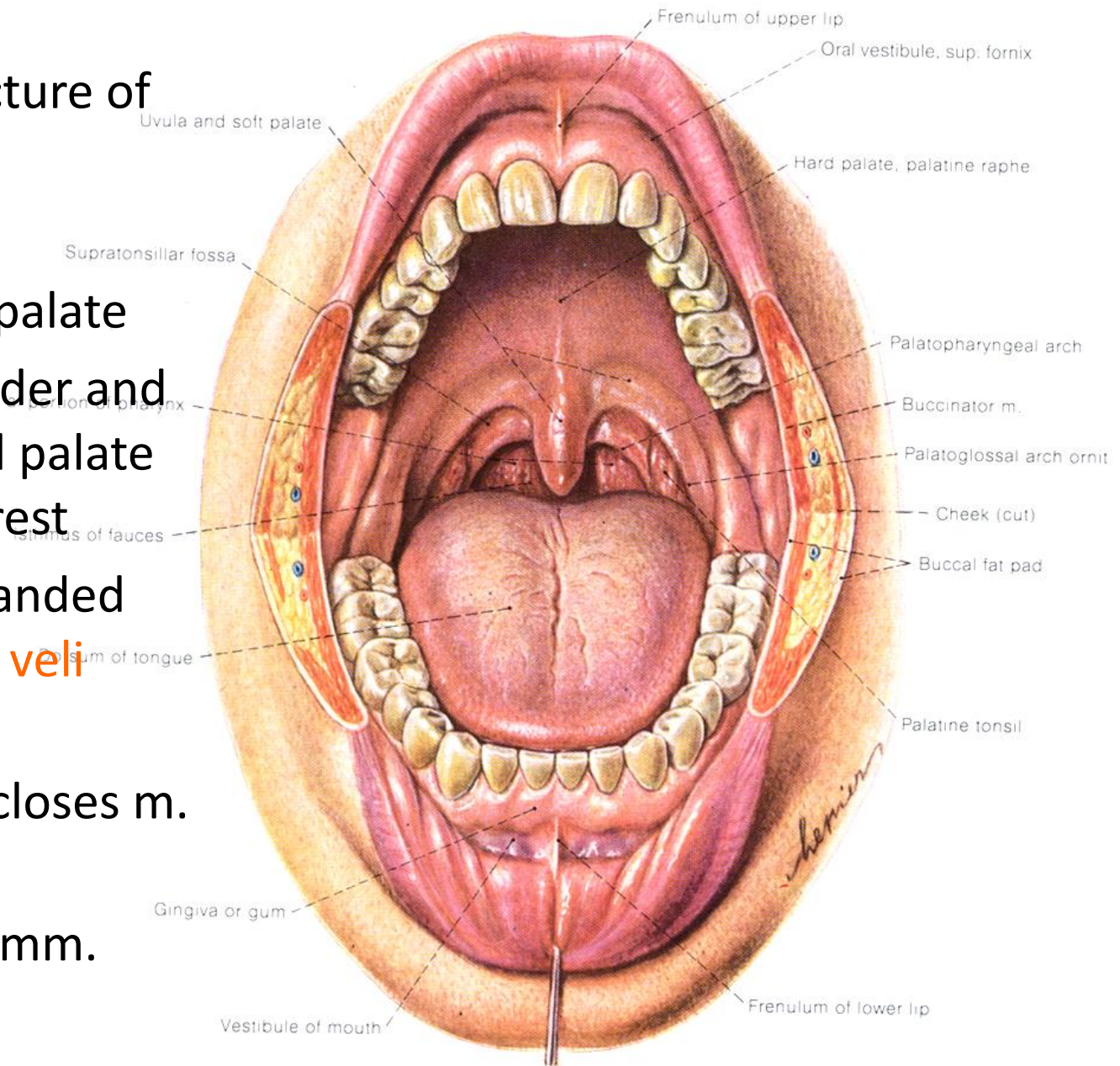
- N: Sensory: Greater palatine n., lesser palatine n., nasopalatine n. (maxillary n.), glossopharyngeal n.





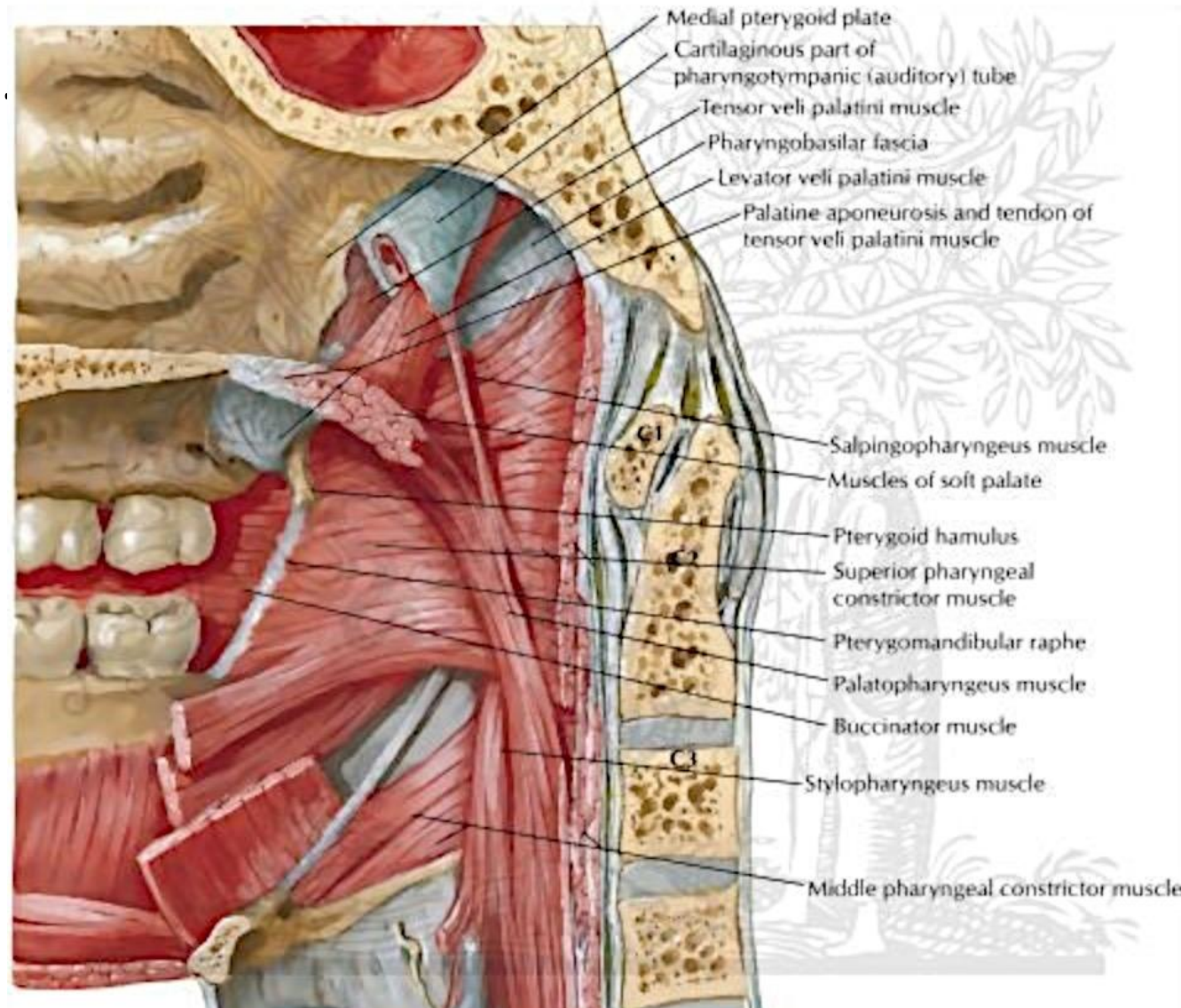
Palatine aponeurosis

- Thin, fibrous structure of the soft palate
- Supports muscles
- Strengthens soft palate
- Attached post border and inf surface of hard palate behind palatine crest
- Composed of expanded tendons of **tensor veli palatini** m.
- Near mid-line, encloses m. uvulae
- All other palatine mm. attach to it



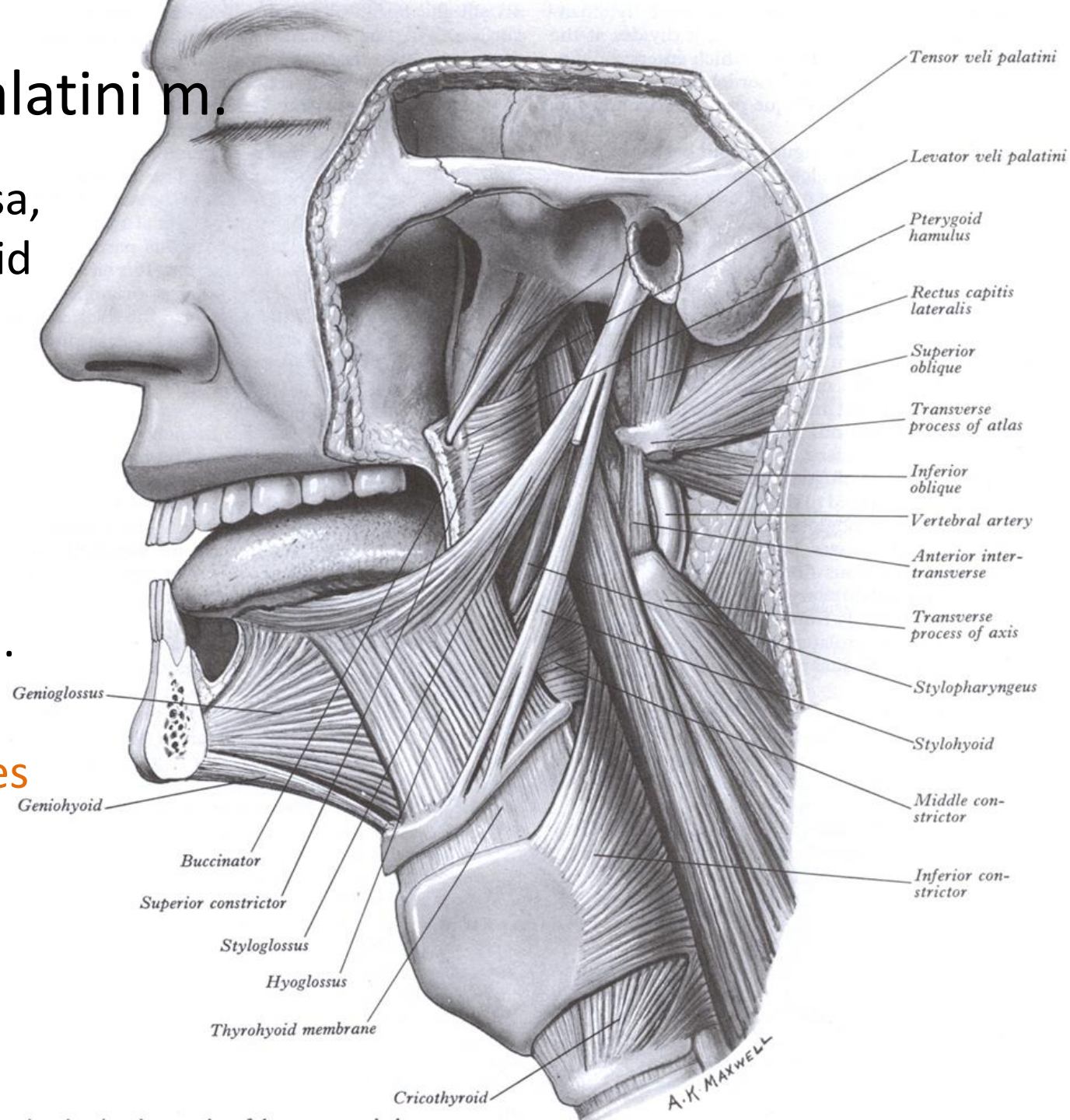
Muscles of the soft palate

Levator veli palatini m.
Tensor veli palatini m.
Palatoglossus m.
Palatopharyngeus m.
M. uvulae



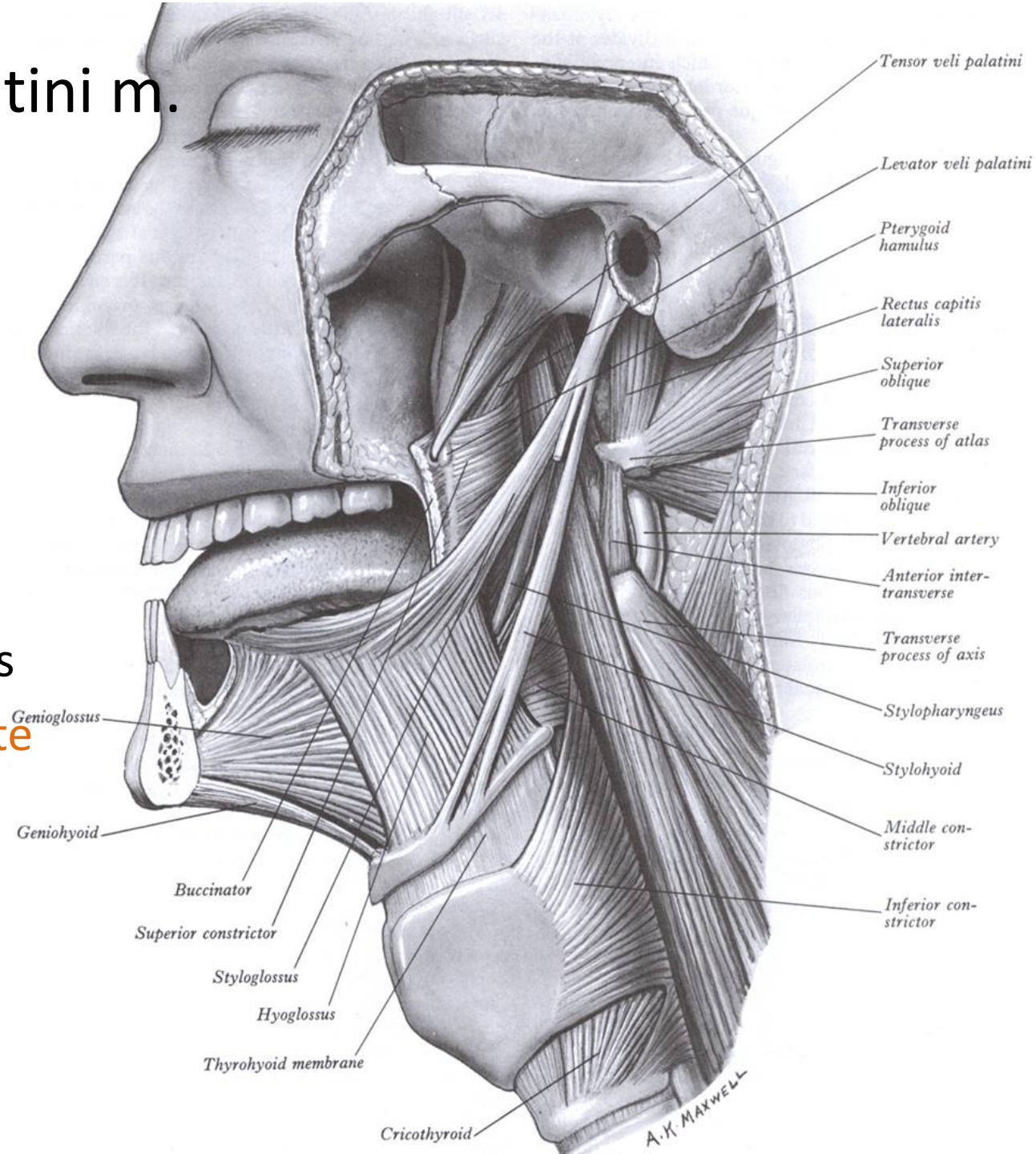
Tensor veli palatini m.

- O: Scaphoid fossa, spine of sphenoid bone, cartilage part of the auditory tube
- I: Palatine aponeurosis
- N: Mandibular n.
- F: Elevates soft palate and tenses it



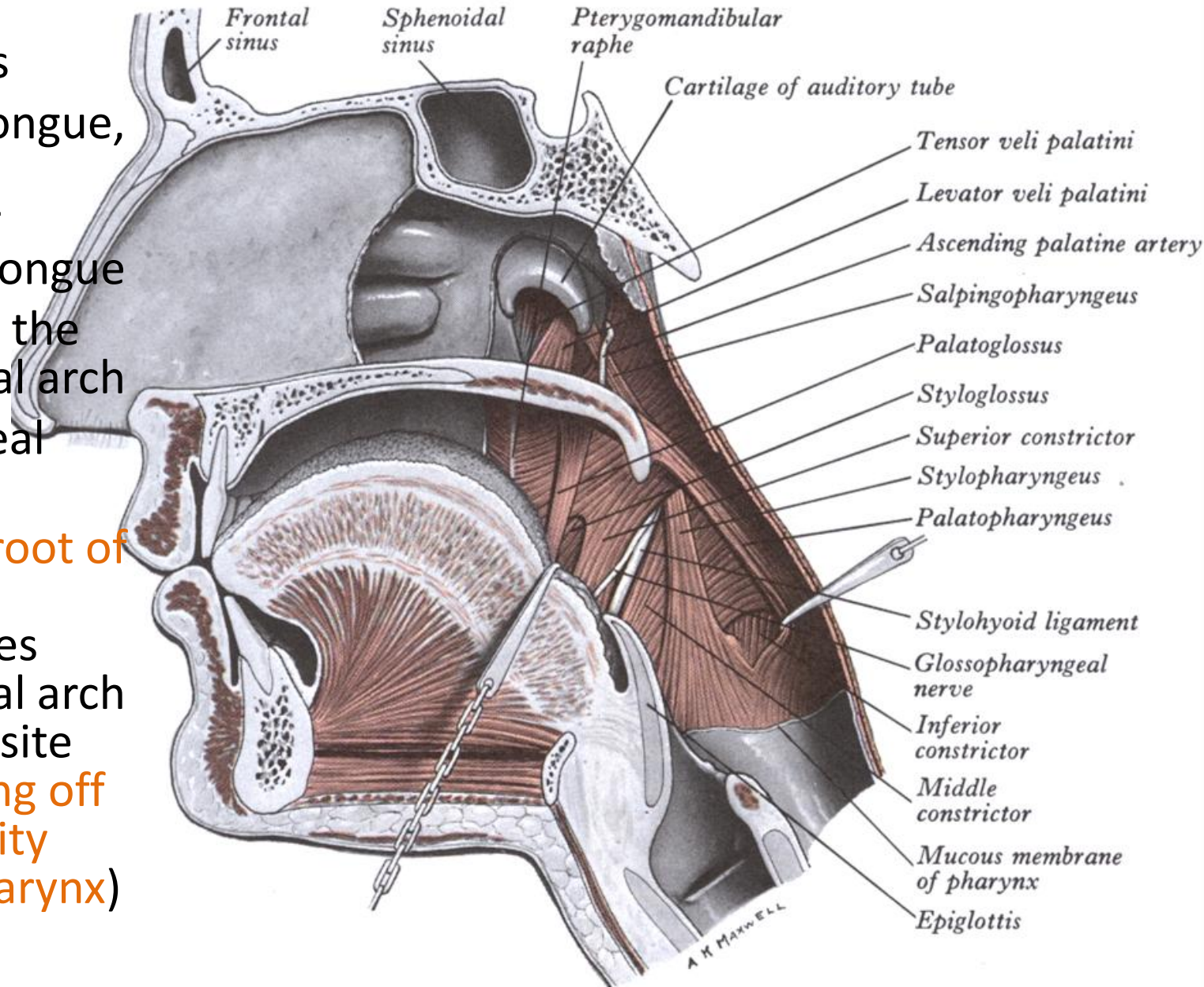
Levator veli palatini m.

- O: Petrous part of temporal bone, cartilage part of the auditory tube
- I: Soft palate, upper surface of palatine aponeurosis
- N: Pharyngeal plexus
- F: Elevates soft palate



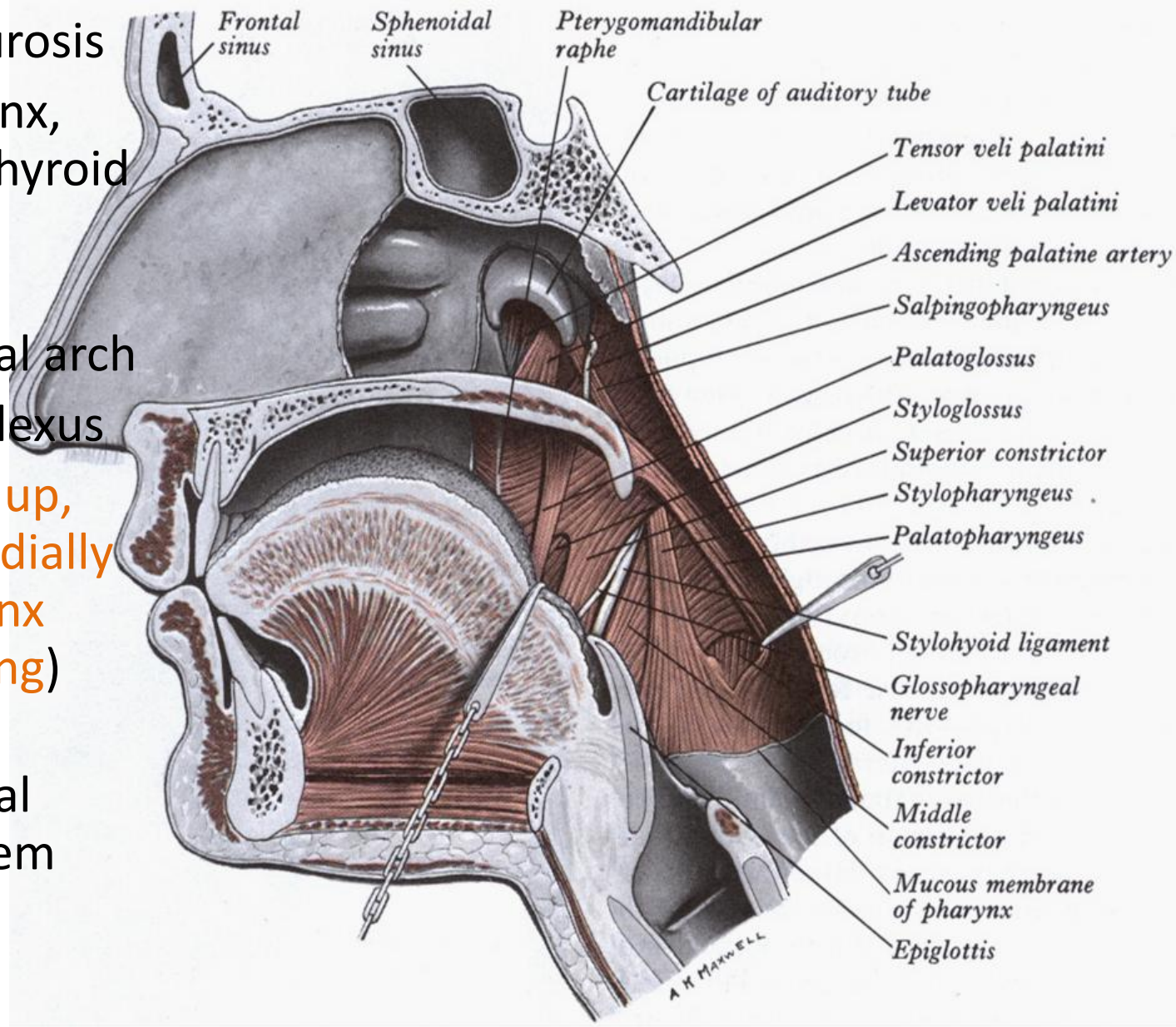
Palatoglossus muscle

- O: Palatine aponeurosis
- I: Sides of tongue, some fibres spread over dorsum of tongue
- Runs within the palatoglossal arch
- N: Pharyngeal plexus
- F: Elevates root of the tongue, approximates palatoglossal arch to the opposite side (shutting off the oral cavity from oropharynx)



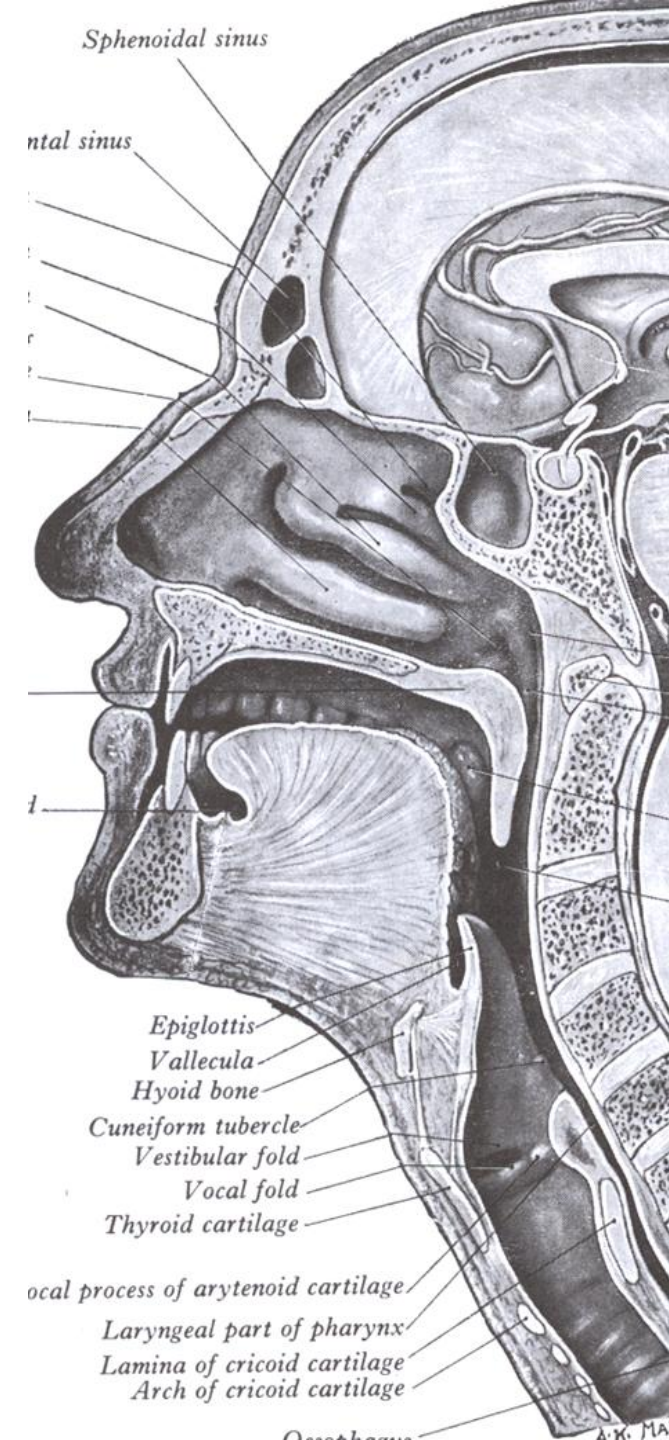
Palatopharyngeus muscle

- O: Hard palate, palatine aponeurosis
- I: Sides of pharynx, post border of thyroid cartilage
- Forms the palatopharyngeal arch
- N: Pharyngeal plexus
- F: Pulls pharynx up, forward and medially (shortens pharynx during swallowing)
- Approximate palatopharyngeal arches, draw them forwards



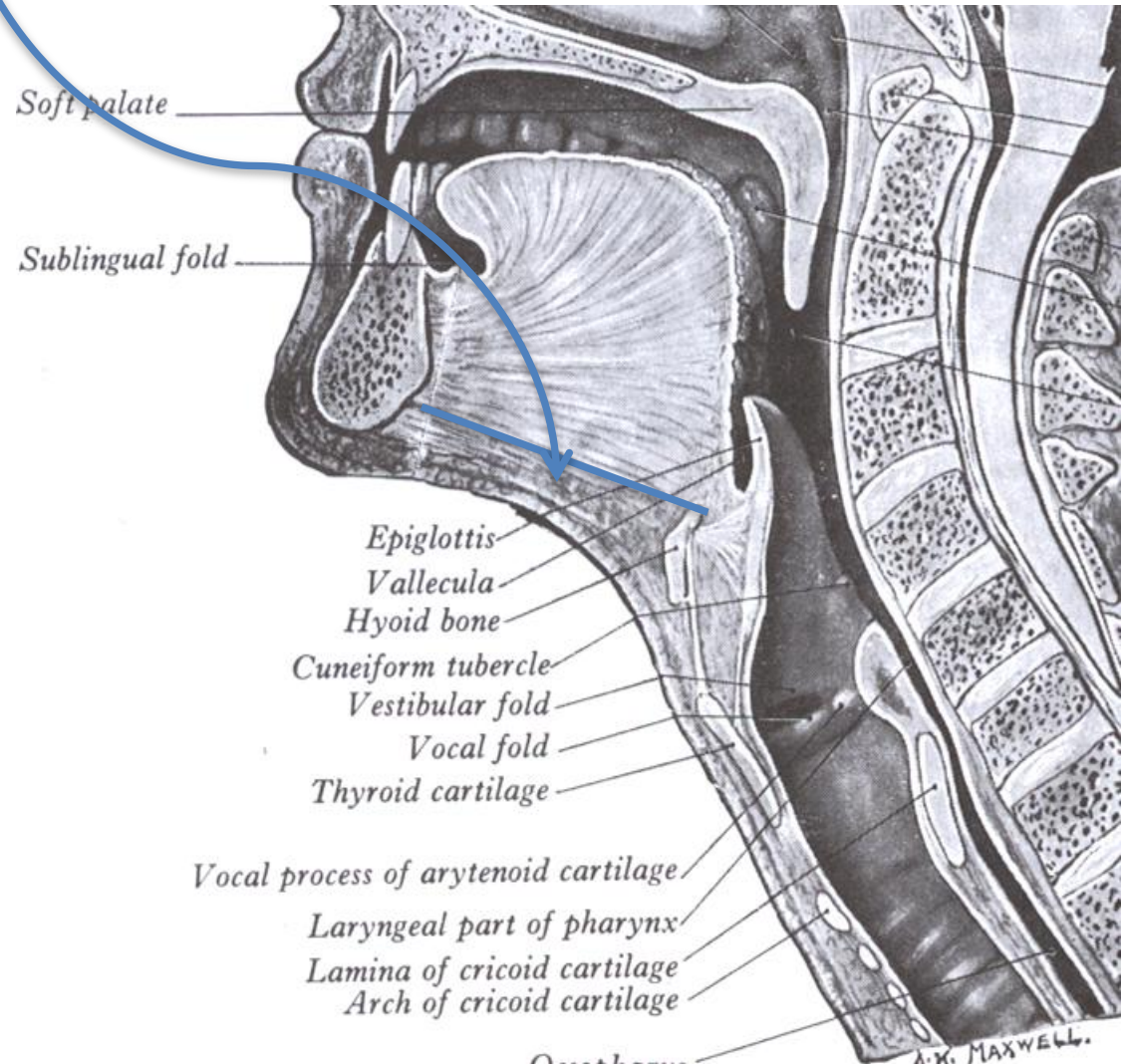
M. uvulae

- O: Post nasal spine, palatine aponeurosis
- I: Mucosa of uvula
- N: Pharyngeal plexus
- F: Elevation and retraction of uvula



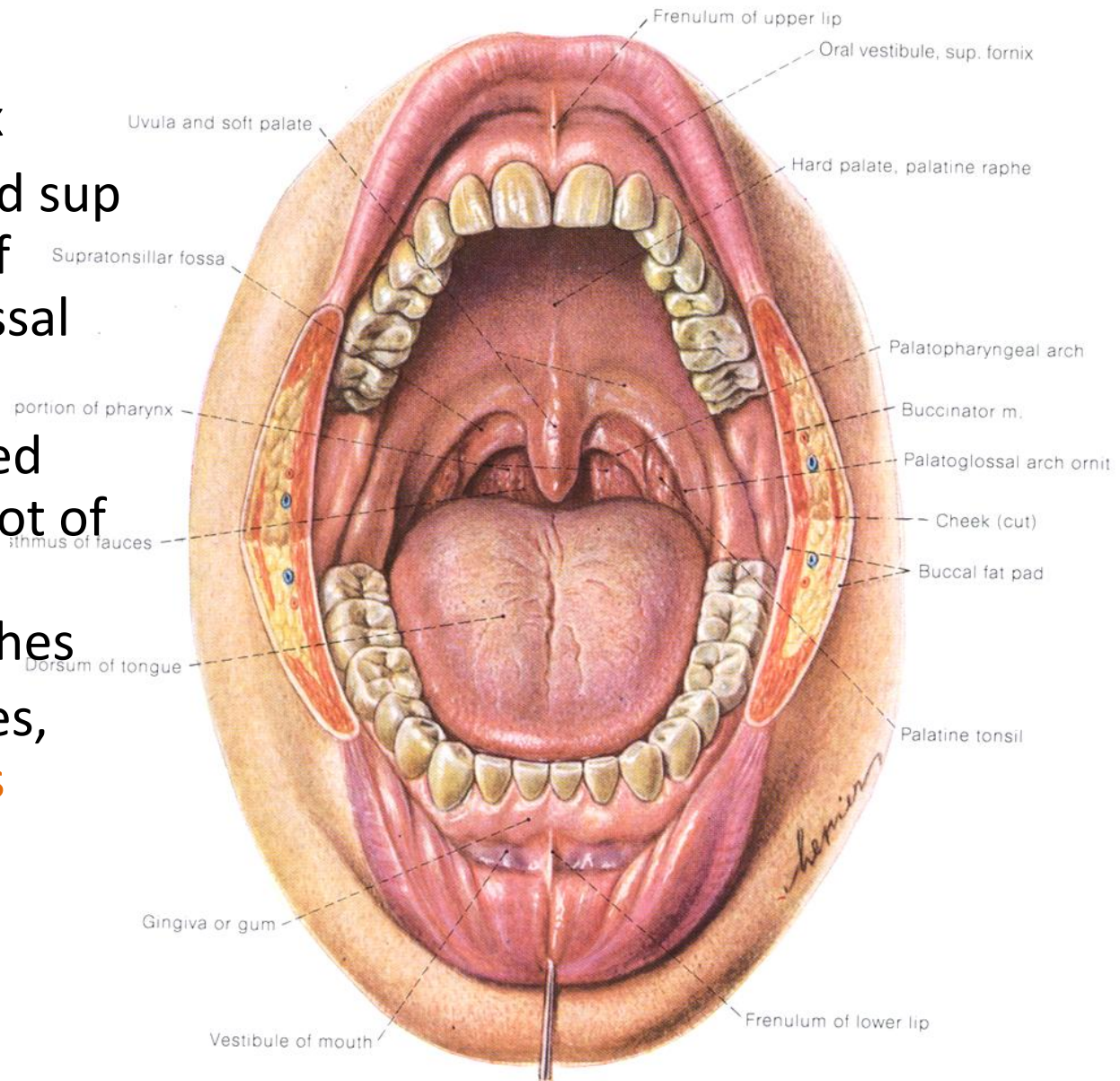
Diaphragma Oris

- Forms the floor of the mouth
- 3 of the suprahyoid mm (mylohyoid m, geniohyoid m, ant belly of digastric m) and fascia form it



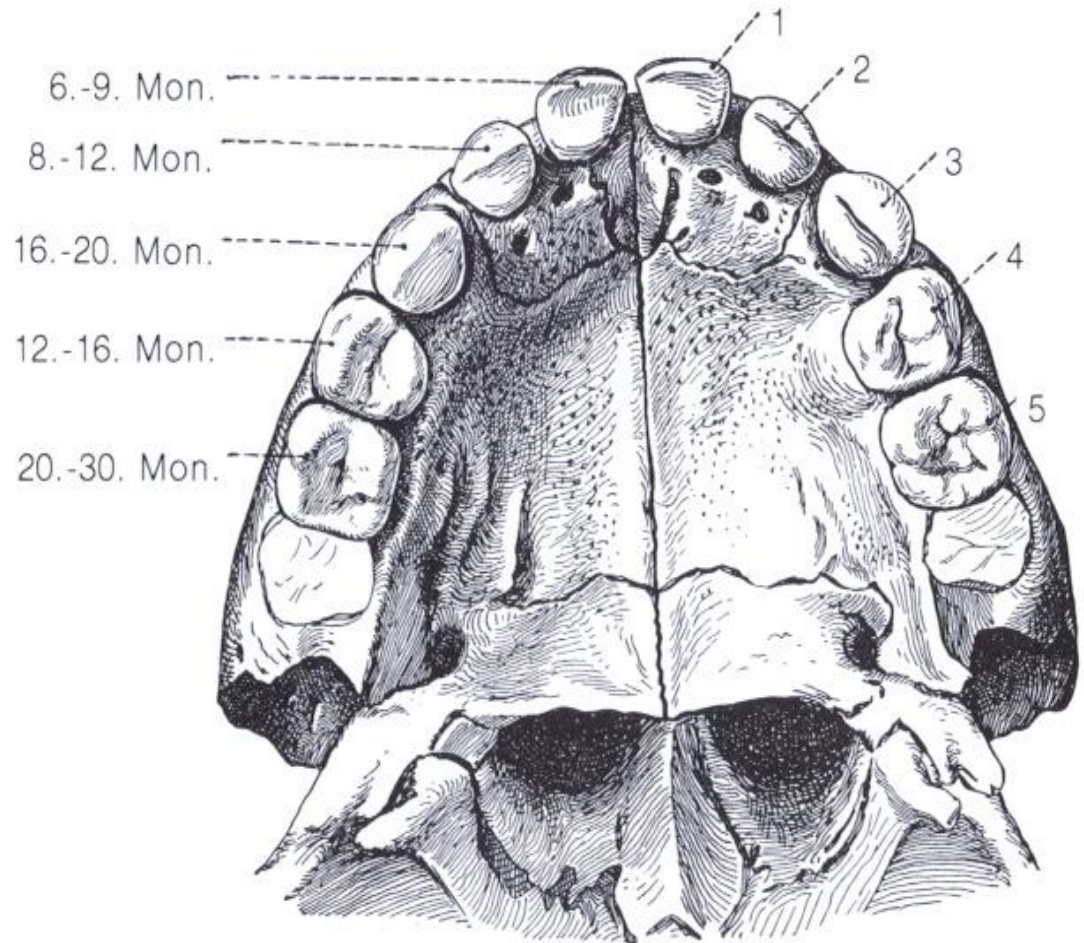
Isthmus of the fauces (oropharyngeal isthmus)

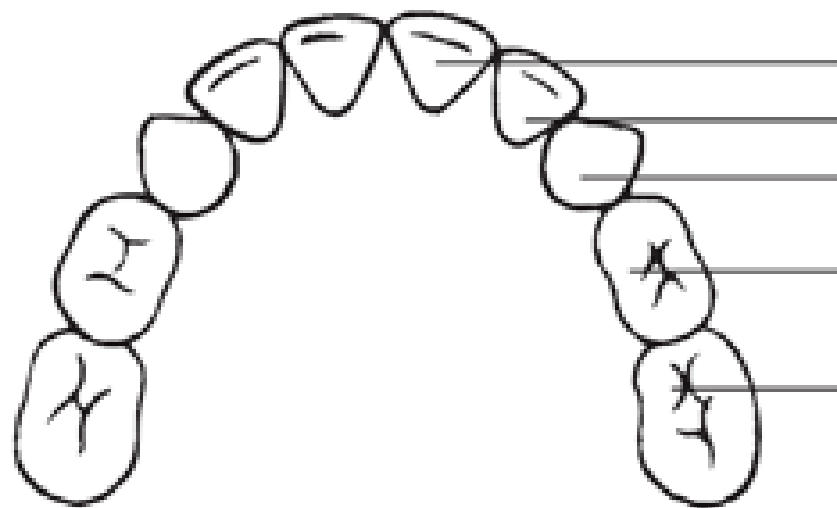
- Connects oral cavity proper to oropharynx
- Ant opening; bounded sup soft palate, inf root of tongue, lat palatoglossal arches
- Post opening; bounded sup soft palate, inf root of tongue, lat palatopharyngeal arches
- In between two arches, found **palatine tonsils**



Teeth

- Deciduous teeth
- Permanent teeth
- Deciduous teeth begin to appear in 6th month, all present in 2.5-3 years old
- Deciduous teeth 20 in number
- 2 Incisors, 1 canine and 2 molars in each quadrant





Upper Teeth

Central incisor
Lateral incisor
Canine (cuspid)

First molar

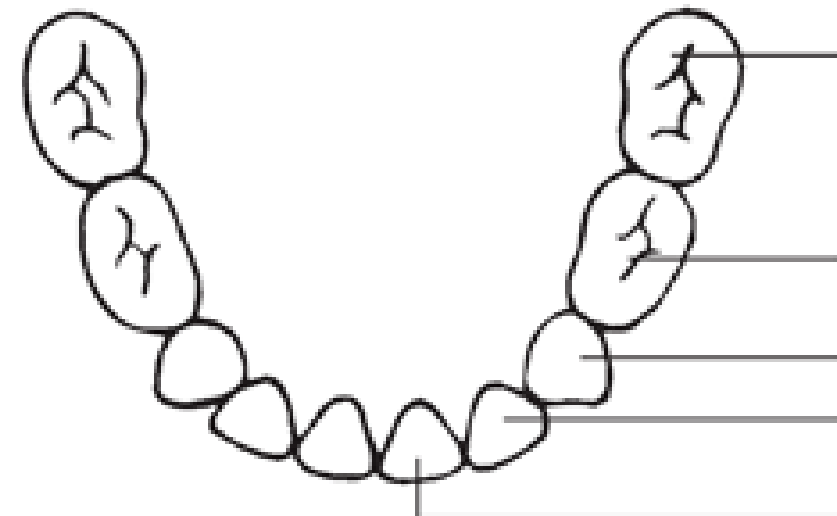
Second molar

Erupt

8-12 mos.
9-13 mos.
16-22 mos.

Shed

6-7 yrs.
7-8 yrs.
10-12 yrs.



Lower Teeth

Second molar

First molar

Canine (cuspid)

Lateral incisor

Central incisor

Erupt

23-31 mos.

14-18 mos.

17-23 mos.

10-16 mos.

6-10 mos.

Shed

10-12 yrs.

9-11 yrs.

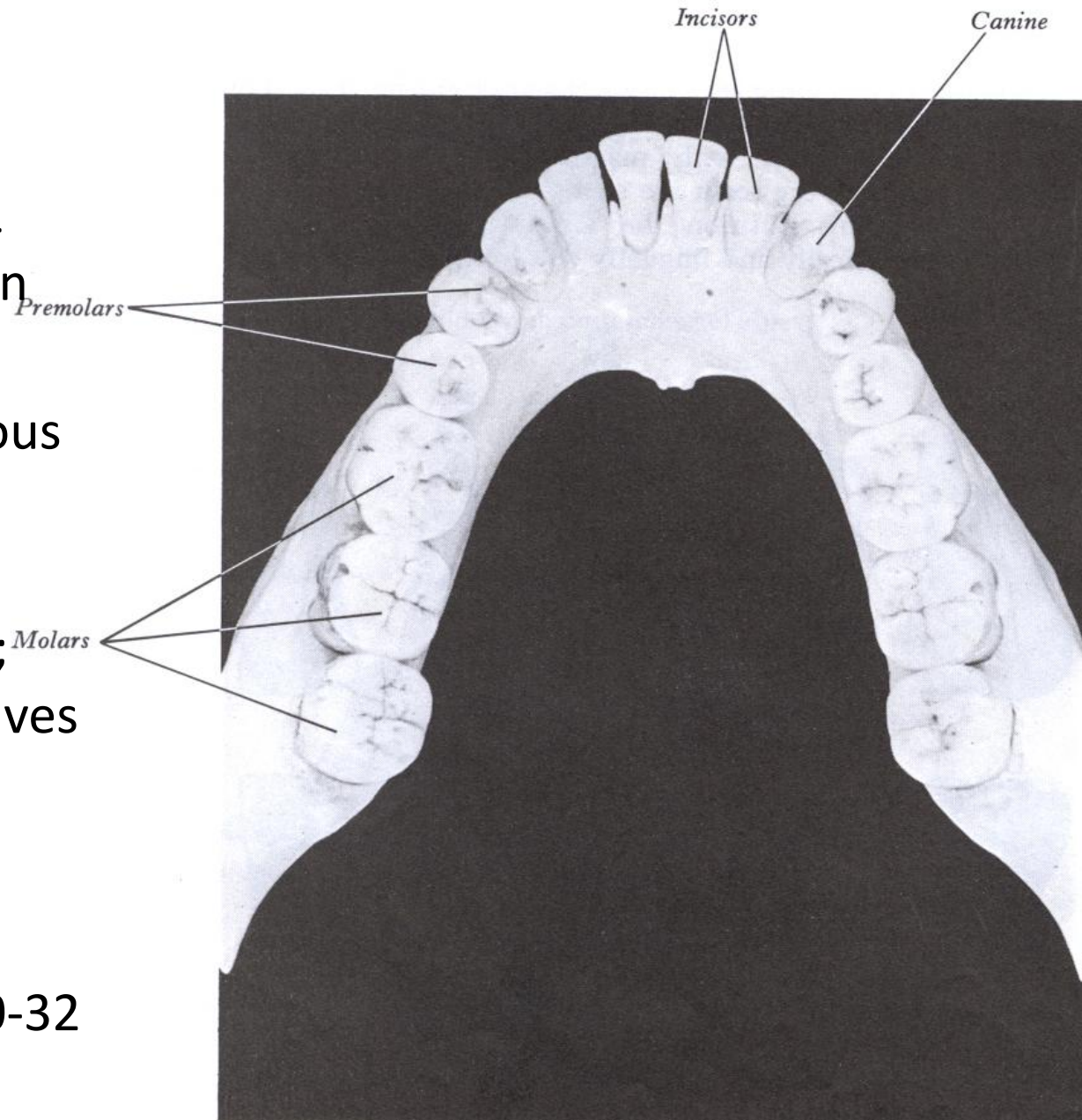
9-12 yrs.

7-8 yrs.

6-7 yrs.

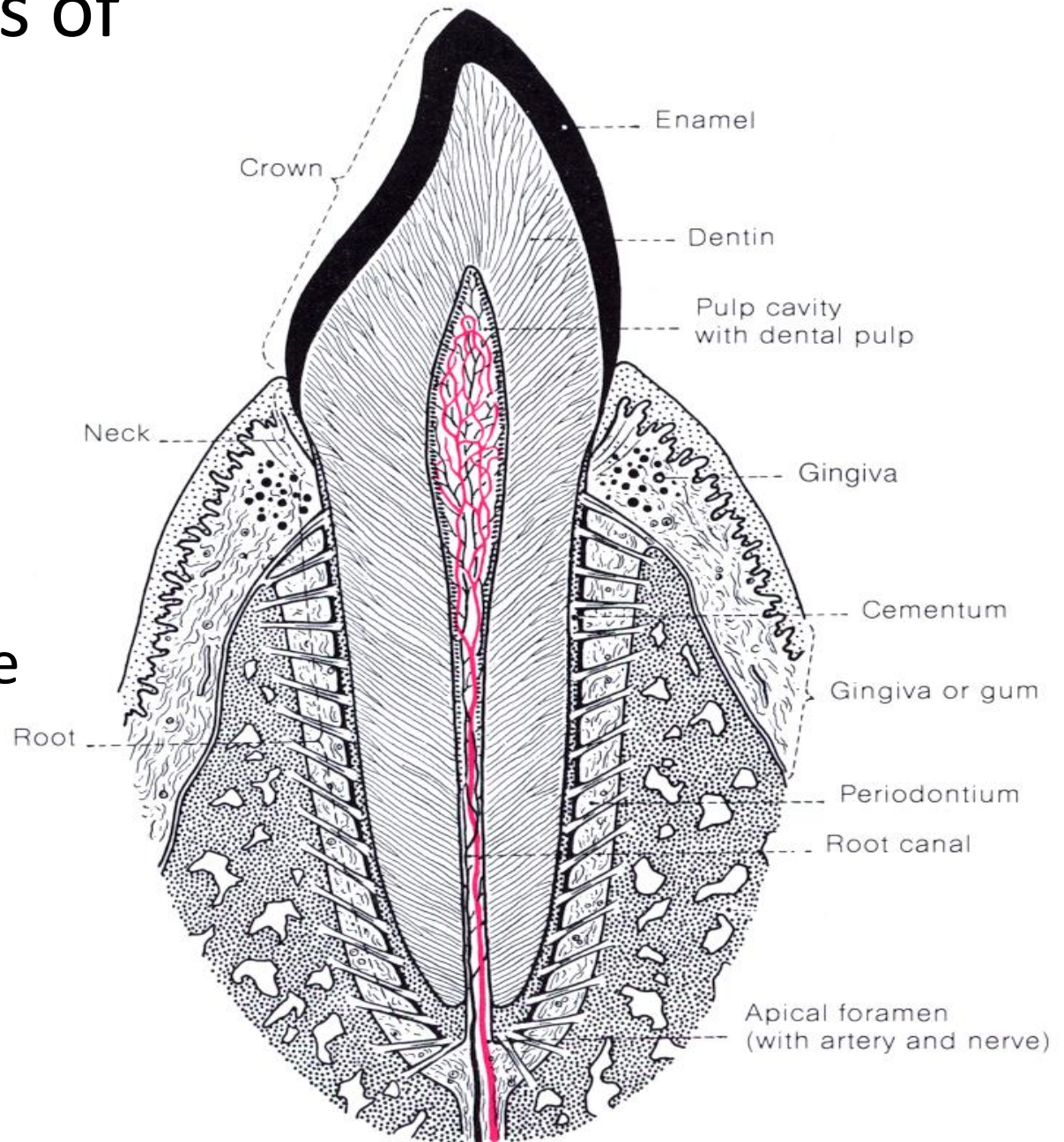
Permanent teeth

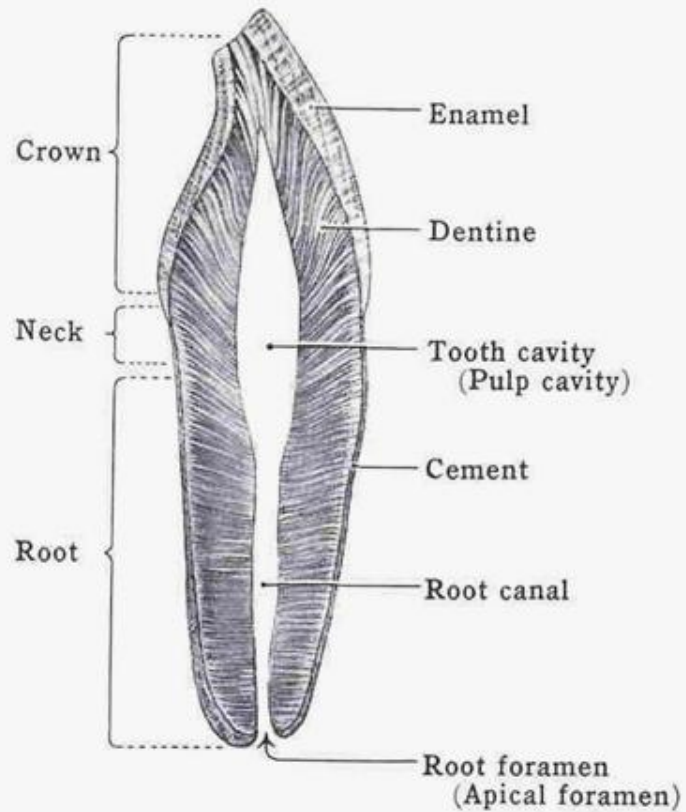
- Totally 32; 8 in each quadrant
- 2 incisors, 1 canine, 2 premolars, 3 molars in each quadrant
- Take place of deciduous teeth beginning from 6th year
- 1st permanent tooth; 1st molar, then; incisors begin to appear
- In 16 years old, 28 of them are present
- 3rd molar appears 20-32 years of age (wisdom teeth)



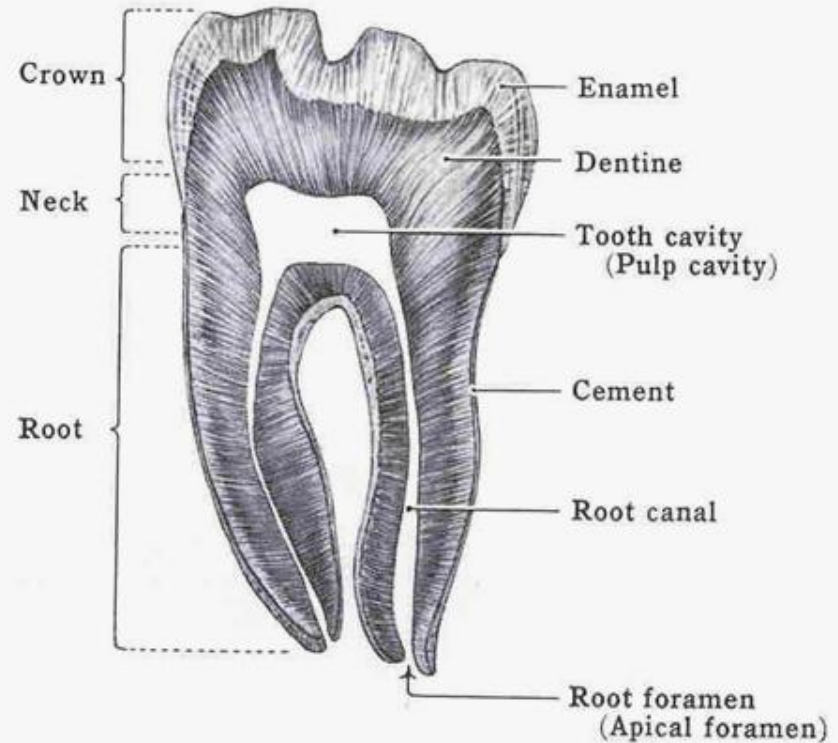
A tooth consists of

- **Crown** (the visible part of the tooth); covered by a very hard translucent **enamel**
- **Root**; covered by yellowish bone like **cement**
- Crown and root meet at the **neck** (cervical margin)





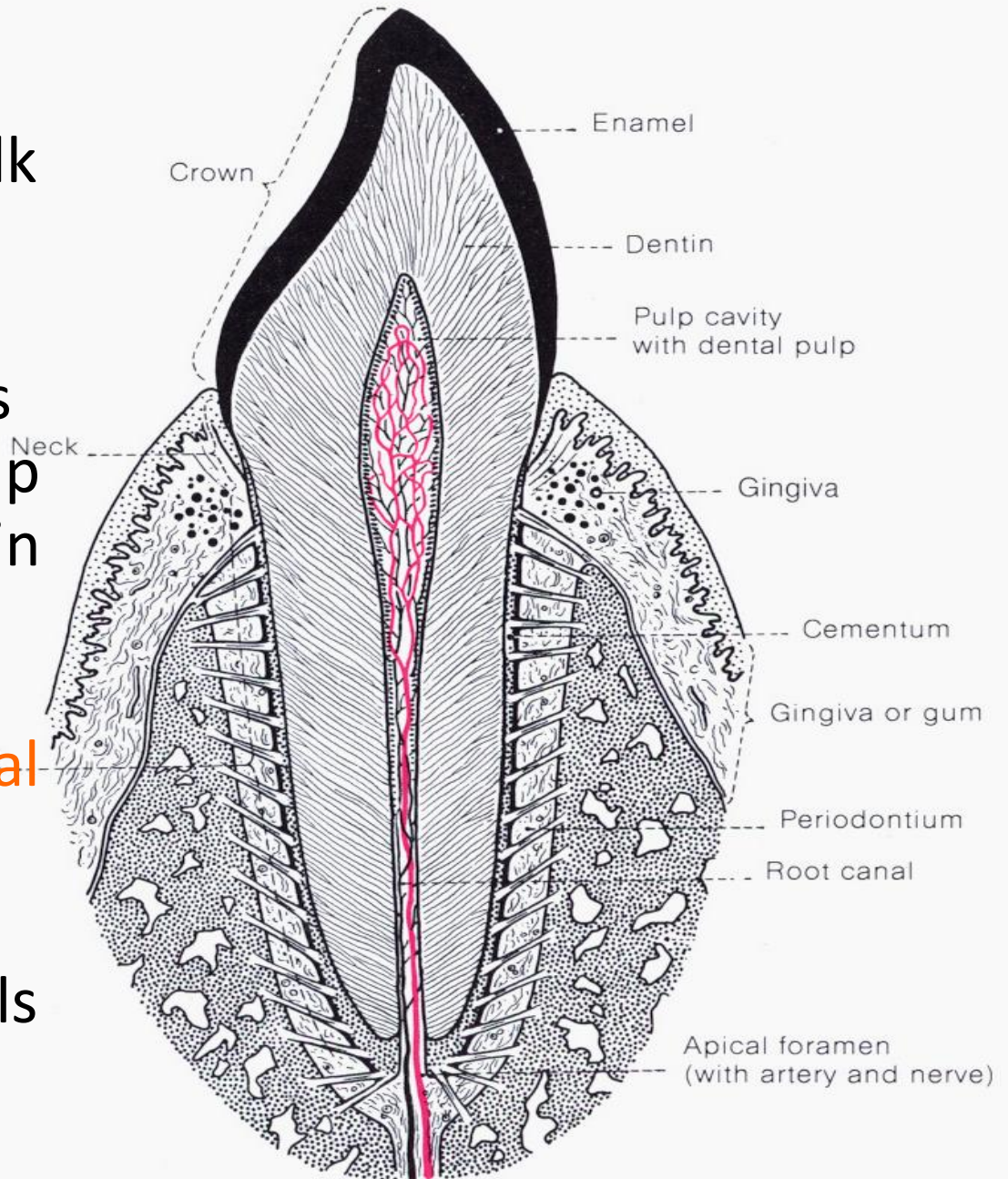
**601 Incisor Tooth,
longitudinal section**



**601.1 Molar Tooth,
longitudinal section**

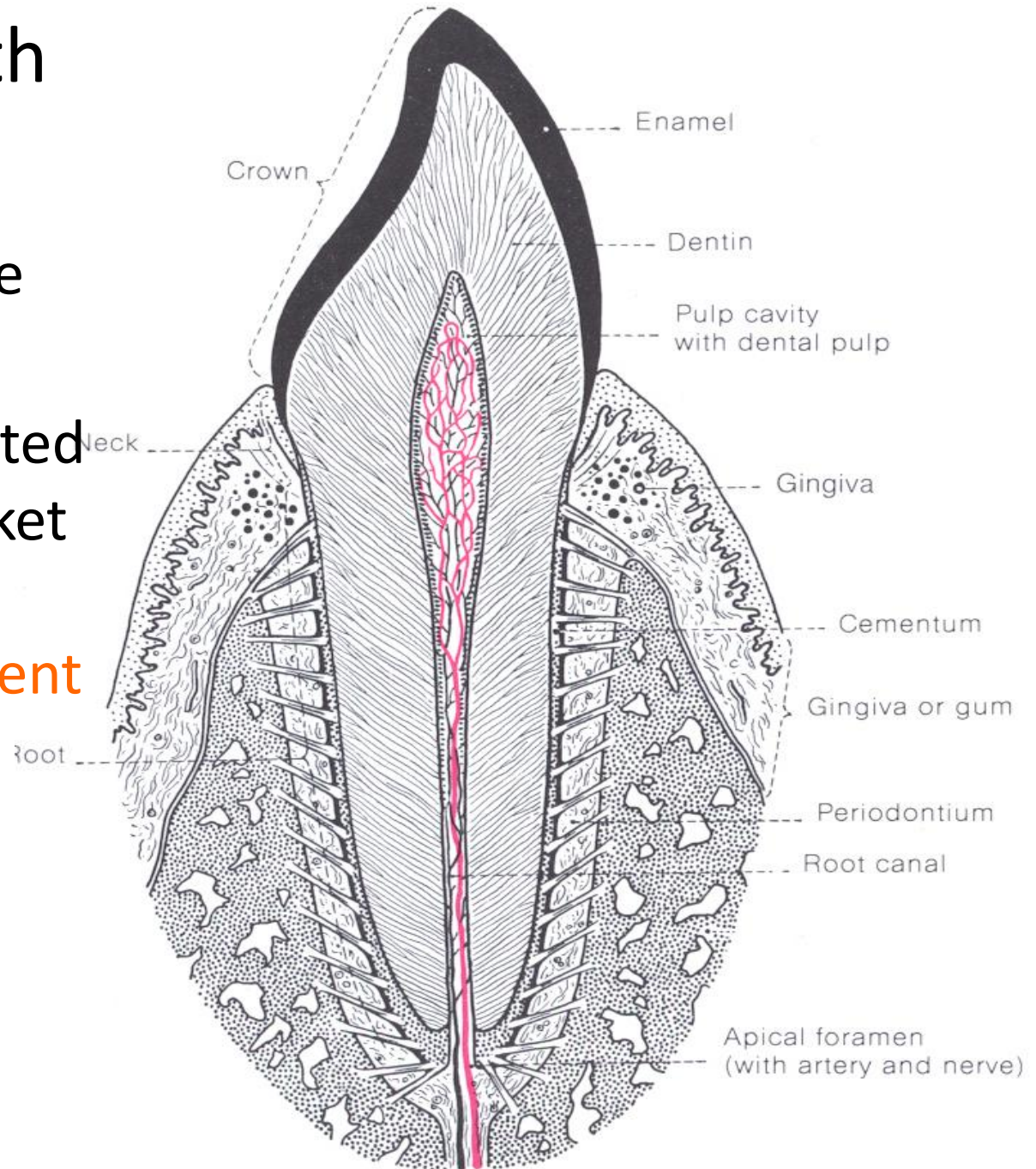
Dentine

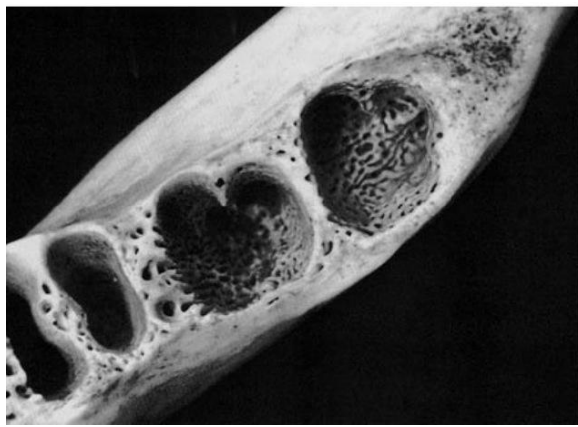
- Yellowish avascular tissue forming the bulk of the tooth
- Contains central **pulp cavity**, expanded at its coronal end into a pulp cavity. It gets narrow in the root as a **pulp canal**, opening at or near its tip by an **apical foramen**
- From the apical foramen; blood vessels and nerves enter and leave the tooth



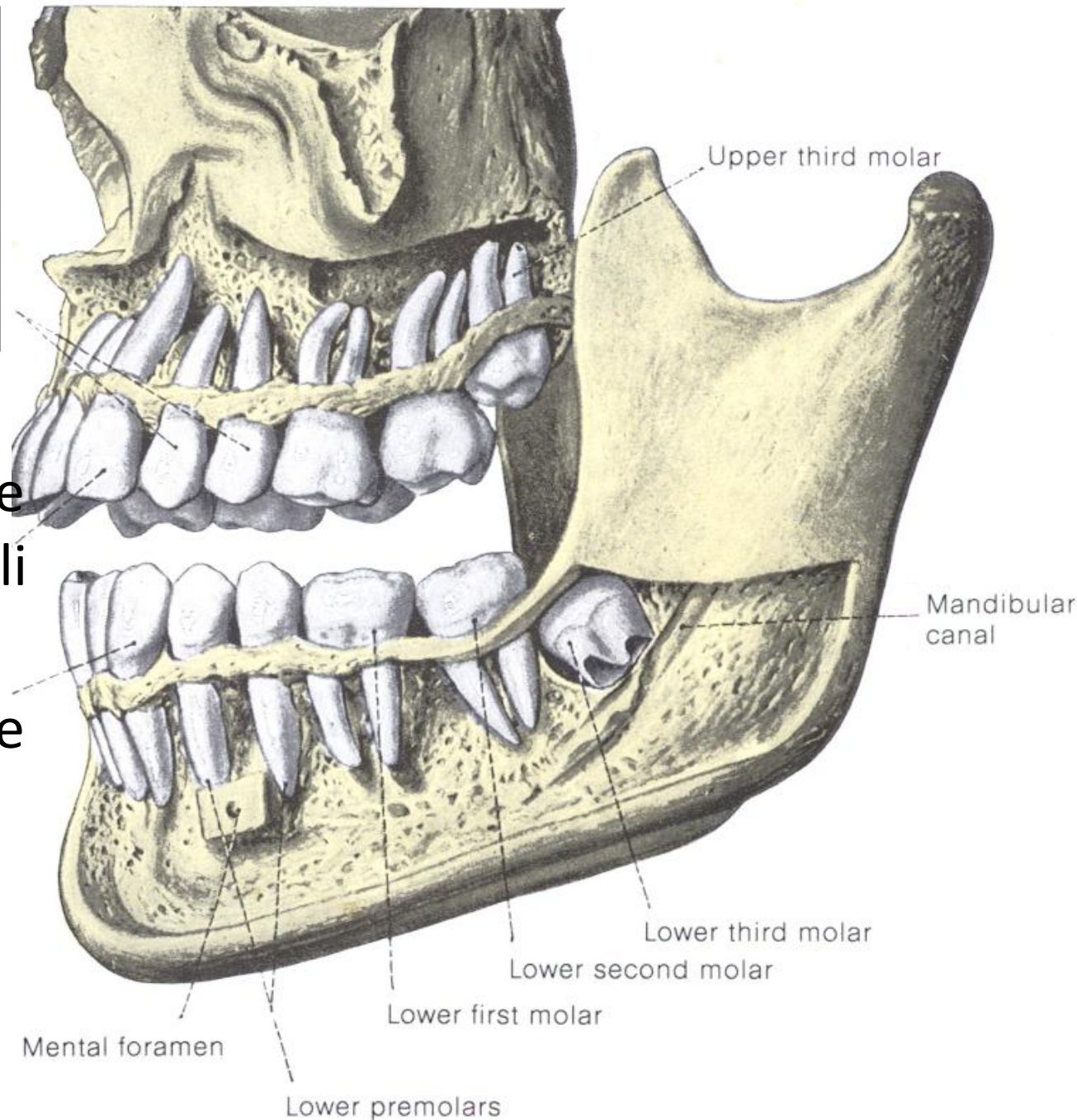
Root of tooth

- Surrounded by the alveolar bone
- Its cement separated from osseous socket (alveolus) by soft **periodontal ligament**





- **Interalveolar septum:** The bone in between alveoli
- **Interradicular septum:** The bone in between roots



Blood vessels and nn of the teeth

- A: Upper jaw: Post sup alveolar a., ant sup alveolar a. (maxillary a.); lower jaw: Inf alveolar a. (maxillary a.)
- V: Same with aa.
- L: Submandibular, deep cervical lymph nodes
- N: Upper teeth: Sup ant alveolar n., sup middle alveolar n., sup post alveolar n. (maxillary n.); lower teeth: Inf alveolar n. (mandibular n.)

